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VOLUME I

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, ~~1959~~ 1960

No. ~~582~~ 21

ARO MANUFACTURING CO., INC., ET AL.,
PETITIONERS,

vs.

CONVERTIBLE TOP REPLACEMENT CO., INC.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

PETITION FOR CERTIORARI FILED DECEMBER 11, 1959
CERTIORARI GRANTED FEBRUARY 29, 1960

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Civil Action No. 56-357-A

CONVERTIBLE TOP REPLACEMENT CO., INC.

v.

AR MANUFACTURING CO., INC.
MAE SHAPERO, and
GEORGE SHAPERO
HAROLD R. SHAPIRO
MARSHALL SHAPIRO
and
JOHN RAYMOND HAMLIN

Basis of action: Infringement of Patent No. 2,569,724 Injunction; accounting; costs.

DOCKET ENTRIES

1956		
Apr.	27	Complaint filed.
		Summons issued.
May	10	Copy of patent in suit filed.
	23	Defendants' answer and COUNTERCLAIM, filed.
June	7	Plf's reply to defts' counterclaim filed.
	22	Plf's motion to file amended complaint bringing additional defendants in, filed.
July	9	ALDRICH, J. Pltf motion to add additional parties defendant with waiver of notice by atty for defts filed and allowed.
	9	ALDRICH, J. Pltf motion to file amended Complaint bringing in additional defts under advisement after hearing, and later allowed.
	28	Defendants' answer to amended complaint filed.
Nov.	21	ALDRICH, J. Defendant's motion to amend answer, and amended answer, assented to, filed.
1957		
Jan.	7	Stipulation that title to patent in suit, No. 2,569,724, is in plaintiff, filed.

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9 Depositions (3) of J. R. Hamelin, Geo. Shapero and Harold Robt. Shapiro, filed.

Feb. 7 Deft's notice of taking deposition of deft Harold R. Shapiro at Newton Feb. 20, 57, filed.

June 21 Depositions of Harold R. Shapiro and Edw. W. Gediman (one envelope), filed.

Oct. 16 Defendants' motion for summary judgment (exhibits 21 and 21 attached), filed.

Nov. 13 Deposition of George Shapiro filed.

25 ALDRICH, J. Defts' motion for summary judgment, under advisement after hearing.

Dec. 4 ALDRICH, J. MEMORANDUM of findings and rulings filed: motion for summary judgment denied. copy to counsel.

4 ALDRICH, J. ORDER denying defendants' motion for summary judgment entered; no further affidavits will be accepted. copy to counsel.

1958

Jan. 23 Defts' further requests filed.

June 21 Defts' list of patents to be relied upon, filed.

July 3 Copy of letter d. 7/1/58 from David Wolf to Paul V. Power stating deft will rely on British pat. No. 447 641 dated May 22, 1936 to Maurice Besoneau.

Aug. 19 ALDRICH, J. Trial without jury begins; evidence.

20 ALDRICH, J. Trial without jury continues; evidence; portion of dep of Harold Shapiro read by plf's counsel; view held by Court; trial without jury continues; evidence.

21 ALDRICH, J. Trial without jury continues; plf reopens case for purpose of offering exhibits 18 through 25; evidence; defts' motion to dismiss filed and denied after hearing; evidence;

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view held by Court; trial without jury continues; evidence.

22 ALDRICH, J. Stipulations as to certain facts filed; trial without jury continues; evidence; defts' motion to amend answer filed Nov. 1956, allowed by agreement.

25 ALDRICH, J. Trial without jury continues; evidence.

26 ALDRICH, J. Trial without jury continues; evidence.

27 ALDRICH, J. Trial without jury continues; evidence; depositions of wits *Wright* and *Wharton* and exhibits offered in evidence by both parties; deposition of *Hult* offered in evidence on question of misuse only; portions of depositions of *Geo. Shapiro* offered in evidence.

28 ALDRICH, J. Trial without jury continues; evidence; briefs by Sept. 15, 1958.

Aug. 28 Court Reporter's transcript of trial (8 vols) Aug. 19, 20, 21, 22, 25, 26, 27, 28, 1958, filed.

Oct. 2 ALDRICH, J. OPINION filed: finding that defendants have substantially infringed; court to hear parties further as to relief. copy to Messrs. Power and Wolf, in hand; copy mailed to Elliott J. Pollock, 803 Ring Bldg., Washington 6, D.C., of counsel for plaintiff.

16 ALDRICH, J. Plf's motion for special precept, filed and allowed.

16 Special precept of attachment issued; del'd to Marshal by counsel.

29 Marshal's return of spec precept; served Oct. 20th defts A. & Geo. Shapiro, John Hamlin, Mae Shapiro, Marshal Shapiro by attachment in Middlesex; same date by attachment in Norfolk

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County deft Harold Shapiro; same date service in hand to defts Mae, Geo. and Harold Shapiro and John Hamlin; without service on Marshall Shapiro (out of Dist. (Chi., Ill.)).

e. 1 ALDRICH, J. Hearing on entry of interlocutory decree.

15 ALDRICH, J. INTERLOCUTORY JUDGMENT entered: ORDERED, ADJUDGED and DECREED:

1. U.S. Letters Patent No. 2,569,724 . . . is good and valid in law, as to claims 3, 4, 5, 7, 8, 9 and 10 thereof;
2. that plf, Convertible Top Replacement Co., Inc. is . . . .possessed of the right, title and interest in and to Mackie-Duluk patent for, to and in Comm. of Mass., together with all rights of action for past infringement accruing since Dec. 30, 1953, of said Mackie-Duluk patent in said Comm. of Mass.;
3. that defts, comprising the corporate deft Aro Mfg. Co., Inc., and defts Mae Shapiro, George Shapiro, Marshall Shapiro, Harold R. Shapiro and John Raymond Hamlin, individually and as a copartnership dba Aro Top Sales Company, have infringed or contributorily infringed claims 3, 4, 5, 7, 8, 9 and 10 of said patent . . . ;
4. that plf. Convertible Top Replacement Co., Inc., recover of corporate deft Aro Mfg. Co., Inc., and of the individual defts Mae Shapiro, etc., damages adequate to compensate for infringement, but in no event less than a reasonable royalty, together with interest and costs as fixed by the Court;

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5. that cause be referred to William R. Hulbert, Esq. as Master; Master to report (inasmuch as there may be questions of law as to whether certain acts constitute infringement or contributory infringement in Mass....) such facts as will assist the Court in making appropriate rulings...

6. that a perpetual injunction be issued...restraining deft Aro Mfg., Co., Inc., and the several individual defts aforesaid, and each of them, their officers, agents, servants, employees, and each of them (a) from directly or indirectly making, etc., structures embodying invention disclosed and claimed in aforesaid claims of aforesaid patent:

(b) from directly or indirectly inducing infringement, in Comm. of Mass., of said claims of said Mackie-Duluk U. S. Letters Patent No. 2,569,724;

(c) from directly or indirectly selling in the Comm. of Mass., convertible automobile replacement top fabrics of types presently identified by defts under their part nos. 434, 224, 225, 226, 227, 228, 231, 233, 234 and 509, or equivalent of any of them;

7. that plf. recover from defts costs of action, to be taxed by Clerk; compensation of the master, at rate of $100 a day shall, unless otherwise agreed, be included in said costs; prior to final taxing the Court will determine whether additional costs shall be imposed pursuant to provs of 35 USC 284.

copy to Messrs. Power and Wolf, and Hulbert, Master.

1958

Dec. 16 Defts' motion to stay Interlocutory Judgment re par No. 6 under R. 62 (c) and (d), FRCP, filed.

18 ALDRICH, J. Motion to stay injunction allowed. David Wolfe, Esquire, for defts, notified.

1959

Jan. 13 Notice of Appeal filed by the deft. from the judgment entered in this action on December 15, 1958. c/s

---

COMPLAINT FOR INFRINGEMENT OF LETTERS PATENT

Now comes Plaintiff and for cause of action against Defendants alleges the following:

1. Plaintiff, Convertible Top Replacement Co. Inc., is a corporation duly organized and existing under, and by virtue of the laws of the State of Maryland, with its principal place of business at Chevy Chase, Maryland.

2. Defendant, Aro Manufacturing Co. Inc., is a corporation duly organized and existing under, and by virtue of the laws of the Commonwealth of Massachusetts, with a regular and established place of business at 1089 Commonwealth Avenue, in or near the City of Boston, Massachusetts; Defendant, Mae Shapero, is, upon information and belief, an officer of Aro Manufacturing Co. Inc., and resides at 1778 Commonwealth Avenue, in or near Auburndale, Massachusetts; Defendant, George Shapero is, upon information and belief, an officer of Aro Manufacturing Co. Inc., and resides at 1778 Commonwealth Avenue, in or near Auburndale, Massachusetts.

3. This action arises under the patent laws of the United States and more particularly under Section 1338 of Title 28, United States Code, and under Sections 271 and 281 of Title 35, United States Code, and is founded upon in-

fringement by Defendants of United States Letters Patent No. 2,569,724, as hereinafter more fully appears. . .

4. On October 2, 1951 United States Letters Patent No. 2,569,724 in the names of Harry A. Mackie and Stanley Duluk for "Convertible Folding Top with Automatic Seal at Rear Quarter," was duly and legally issued to General Motors Corporation, a corporation of Delaware. The entire right, title and interest in and to the said United States Letters Patent No. 2,569,724, was thereafter, on December 30, 1953, sold, assigned and transferred to Automobile Body Research Corporation, a corporation of Maryland, by virtue of an assignment duly recorded in the United States Patent Office at Reel 023, Frame 378; and since that date said Automobile Body Research Corporation has been and still is owner of those Letters Patent, except insofar as said Automobile Body Research Corporation has granted certain rights to Plaintiff, as hereinafter more fully appears.

5. On April 17, 1956, the said Automobile Body Research Corporation, by Territorial Grant, sold, assigned and transferred unto Plaintiff the right, title and interest in and to the said Letters Patent No. 2,569,724, for, to and in the Commonwealth of Massachusetts, and since that date Plaintiff has been and still is the owner of said territorial rights in said Letters Patent.

6. Defendant, Aro Manufacturing Co. Inc., has for a long time past and still is infringing and contributing to the infringement of said Letters Patent by making, selling and using convertible folding tops that are covered by said Letters Patent, within the Commonwealth of Massachusetts, and will continue to do so unless enjoined by this Court.

7. Defendants, Mae Shapero and George Shapero, as individuals and as alleged officers of the said Aro Manufacturing Co. Inc., have for a long time past and still

are infringing and contributing to the infringement of said Letters Patent by making, selling and using convertible folding tops that are covered by said Letters Patent, within the Commonwealth of Massachusetts, and will continue to do so unless enjoined by this Court.

8. Upon information and belief, Aro Manufacturing Co. Inc. is controlled by and in fact comprises the mere alter ego of Defendants, Mae Shapero and George Shapero, whereby the infringing acts of Defendants Aro Manufacturing Co. Inc. are in fact infringing acts of Defendants Mae Shapero and George Shapero.

9. On January 2, 1954, Automobile Body Research Corporation, Plaintiff's predecessor in title to said Letters Patent, gave written notice to Defendants of their said infringement, and Defendants have continued to infringe said Letters Patent after receiving said notice.

WHEREFORE, Plaintiff demands a preliminary and final injunction against further infringement by Defendants and those controlled by Defendants, an accounting for profits and damages, an assessment of costs against Defendants, and such further or other relief as this Honorable Court may deem meet and proper.

(s) WALTER JAY SKINNER
Shawmut Bank Bldg.
Boston 9, Mass.

Of Counsel:
ELLIOTT I. POLLOCK
803 Ring Bldg.
Washington 6, D. C.

DEFENDANTS' ANSWER

The Defendants in the above-entitled action collectively answer the Plaintiff's complaint as follows:

1) Defendants have no knowledge of the allegations of paragraph 1 and, therefore, demand proof.

2) Defendants admit the allegations of paragraph 2, except that they deny the allegation with respect to the address of Aro Manufacturing Co., Inc.

3) Defendants admit the allegations of paragraph 3, except that they deny infringement of Letters Patent No. 2,569,724.

4) Defendants admit that Patent No. 2,569,724, in the name of Harry A. Mackie and Stanley Duluk was issued to General Motors, but have no knowledge of or specifically deny each and every other allegation set forth in this paragraph and accordingly call upon the Plaintiff to prove the same.

5) Defendants have no knowledge of the allegation set forth in paragraph 5 and accordingly call upon the Plaintiff to prove the same.

6) Defendants deny the allegations of paragraph 6.

7) Defendants deny the allegations of paragraph 7.

8) Defendants deny the allegations of paragraph 8.

9) Defendants deny that they infringe Letters Patent No. 2,569,724, and further they deny they received a letter from Plaintiff's predecessor indicating they were infringing said patent.

Further answering the Bill of Complaint, the Defendants on information and belief allege that said Letters Patent No. 2,569,724 is wholly void and invalid at law and of no legal effect and is not infringed for one or more of the following reasons;

10) Because the alleged invention of said patent was shown and described in printed publications in the United States and countries foreign to the United States before the alleged invention by the patentee, and or more than one year prior to the filing of the application of which said patent issued as follows: *United States Patents*

Patent No.	*Name*	*Date*
1,809,505	Campbell	June 9, 1931
2,549,153	Ackermans	April 17, 1951

Foreign Patents

564,361 (Great Britain) September 24, 1944,

and others of whom Defendants are not at present advised but beg leave to add hereto by proper amendment when information thereof is obtained.

11) Said patent discloses no patentable invention over and or in view of the state of the art at and prior to the time the alleged invention is purported to have been made and as illustrated in the instances thereof referred to in the preceding paragraph.

14) The claims of said Letters Patent do not comply with the requirements of the patent laws of the United States and are directed to unpatentable aggregations and/or exhausted combinations and further are vague, indefinite, functional and incomplete and broader than the state of the art permits and, therefore, invalid and void.

15) The prior art known before the alleged invention of the articles and methods alleged to be secured to Plaintiff by the said Letters Patent so limits and restricts the scope of the claims of the said patent, the articles made or sold by Defendants and the method used by others in connection with the articles so made and sold, can not be regarded as infringements. Defendants do not manufacture, sell or offer for sale, practice or advocate use of combinations as set forth in the said patent but merely manufacture articles which are not a material part of said patent, that the articles manufactured by Defendants are not made especially for or adapted for use in articles covered by the claims of said patent and further are

staple articles or commodities of commerce which are suitable for substantial noninfringing uses.

* * *

19) Defendants manufacture only convertible replacement tops to replace worn, damaged, destroyed or stolen fabric tops of the original manufacturer. Said manufacturers each operate under license of said patent, which license includes a specific and/or implied license to purchasers to repair, replace and renew lost, stolen, broken, damaged, destroyed or worn out parts without liability for patent infringement, which specific and/or implied license extends to Defendants.

Further answering by way of counterclaim, the Defendants allege:

1) That this counterclaim constitutes a petition for declaratory judgment or decree under judicial code section 274 D 28 U. S. Code 2201 and 2202 holding that the patent in suit is invalid for want of invention and if valid, then it is not infringed.

2) Jurisdiction is invoked under judicial code section 274 D 28 U. S. Code 2201 and 2202 on a controversial issue arising under the patent laws.

3) The said Patent No. 2,569,724, as to each of the claims thereof, is invalid for the reasons specifically set forth in the foregoing answer. Each of such reasons being hereby incorporated in this counterclaim to the same extent as though specifically stated.

4) Said Patent No. 2,569,724, if valid, has not been and is not being infringed or contributorily infringed by the Defendants in this district or elsewhere.

Wherefore, Defendants pray:

a. That the complaint as regards the alleged causes of action of the Plaintiff against the Defendants be dismissed.

b. That this court find and enter a decree herein

holding that said Patent No. 2,569,724 is invalid for want of invention.

c. That this court find and enter a decree herein holding that said Patent No. 2,569,724 is invalid for anticipation and for the prior public use.

* * *

e. That this court, in the event a claim or claims of Patent No. 2,569,724 is found to be valid, then find and enter a decree herein holding that such claims or claim is not infringed by the Defendants or alternately is not contributorily infringed by the Defendants.

f. That Defendants have an implied and/or express license to repair, replace or renew damaged, destroyed, lost or stolen fabric automobile tops.

g. That the Defendants have judgment for costs and such other and further relief as equity may require or to this honorable court may seem meet and just.

(s) EZEKIEL WOLF
Attorney for Defendants

Dated
May 23, 1956

INTERROGATORIES

Now comes Plaintiff and, under the provisions of Rule 33, Federal Rules of Civil Procedure, propounds the following interrogatories to Defendants and to each of them.

DEFINITIONS

In connection with the following Interrogatories 1 to 6 inclusive, the term "replacement top" refers to a fabric having a configuration such as that it may be installed on a convertible automobile in place of the original fabric after the latter has worn out; and the said term is not

to be regarded as including the bows, the pillars, or the folding mechanism.

INTERROGATORY 1

(a) Has Defendant Aro Manufacturing Co., Inc., since the date of the grant of the patent in suit and prior to the filing of the Complaint herein, manufactured or sold replacement tops designed for installation on Ford convertible automobiles of any of the following models: 1952 model, 1953 model, 1954 model?

(b) If the answer to Interrogatory 1(a) is in the affirmative, have any of Defendants issued, or caused to be issued, any literature, advertising materials or instruction sheets relating to said replacement fabrics?

(c) If the answer to Interrogatory 1(b) is in the affirmative, give the title and date of each piece of literature, advertising material or instruction sheets relating to said replacement tops.

(d) For each document specified in your answer to Interrogatory 1(c), state whether one or more copies of such document was distributed by the following:

A. Defendant Aro Manufacturing Co., Inc.;

B. Defendant Mae Shapero or any partnership of which she is a partner;

C. Defendant George Shapero or any partnership of which he is a partner.

(s) WALTER JAY SKINNER
Attorney for Plaintiff

Of Counsel:

(s) ELLIOTT I. POLLOCK

ANSWERS TO INTERROGATORIES PROPOUNDED TO DEFENDANTS

Now comes the defendants and answer the interrogatories propounded to them under oath and collectively as follows:

Interrogatory No. 1 (a) Yes.

• • •

ARO MANUFACTURING COMPANY, INC.
By (s) MAE SHAPERO,
President

MAE SHAPERO
By (s) MAE SHAPERO

GEORGE SHAPERO
By (s) GEORGE SHAPERO.

COMMONWEALTH OF MASSACHUSETTS:
COUNTY OF : ss

Sworn to and subscribed before me this day of , 1956.

(s)

[SEAL] *Notary Public*

PLAINTIFF'S REPLY TO DEFENDANTS' COUNTERCLAIM

On pages 5 and 6 of Defendant's Answer there appear four paragraphs said to constitute a counterclaim, although they have no legal standing as such, and Plaintiff's reply to the said alleged counterclaim is as follows:

1. Paragraph 1 of the Counterclaim is denied.

2. Paragraph 2 of the Counterclaim is denied, except Plaintiff admits that there is a controversial issue between Plaintiff and Defendants arising under the U. S. patent laws; but Plaintiff states that the controversy is fully defined in the Complaint and Defendants' Answer thereto.

3. Plaintiff denies all allegations in Paragraph 3 of the Counterclaim.

4. Plaintiff denies all allegations in Paragraph 4 of the Counterclaim; the true facts in this regard are stated in the Complaint and are incorporated herein by reference.

Plaintiff also denies that Defendants are entitled to any of the relief prayed for in Paragraphs (a) to (g) inclusive on page 6 of Defendants' Answer.

Plaintiff therefore prays that the Counterclaim be dismissed.

(s) WALTER JAY SKINNER
Attorney for Plaintiff

AMENDED COMPLAINT

Now comes plaintiff and for cause of action against defendants alleges the following:

• • •

[Paragraph 1 being the same as paragraph 1 of the original complaint, is here omitted.]

2. Defendant, Aro Manufacturing Co., Inc., is a corporation duly organized and existing under, and by virtue of, the laws of the Commonwealth of Massachusetts, with a regular and established place of business at Newton, Massachusetts; Defendant, Mae Shapiro is, upon information and belief, an officer of Aro Manufacturing Co. Inc., and resides at 1778 Commonwealth Avenue, Newton, Massachusetts; Defendant, George Shapiro is, upon information and belief, an officer of Aro Manufacturing Co. Inc., and resides at 1778 Commonwealth Avenue, Newton, Mass.; moreover, upon information and belief, Mae Shapiro and George Shapiro are partners in a partnership doing business within the Commonwealth of Massachusetts as Aro Top Sales Co.; and the other partners in said Aro Top Sales Co. comprise, upon information and belief, Defendant, Marshall Shapiro, residing at 4970 Marine Drive,

Chicago, Illinois, Defendant, Harold R. Shapiro, residing at 3 Willow Park, Wellesley Hills, Mass., and Defendant John Raymond Hamlin, residing at 74 Broadway, Arlington, Mass.

[Paragraphs 3, 4, 5 and 6 being the same as paragraphs 3, 4, 5 and 6 of the original complaint, is here omitted.]

7. Defendants, Mae Shapiro, George Shapiro, Marshall Shapiro, Harold R. Shapiro and John Raymond Hamlin, and each of them, have for a long time past and still are infringing and contributing to the infringement of said Letters Patent by selling and using said convertible tops, within the Commonwealth of Massachusetts, and will continue to do so unless enjoined by this Court.

8. Defendants Mae Shapiro, George Shapiro, Marshall Shapiro, Harold R. Shapiro and John Raymond Hamlin, doing business as Aro Top Sales Co., have acted as a sales agency for the convertible tops manufactured by Aro Manufacturing Co., Inc.

9. Upon information and belief, Aro Manufacturing Co. Inc. is controlled by and in fact comprises the mere alter ego of the defendants as individuals who control the company and use the corporation solely to further the interests of their partnership, whereby the infringing acts of Aro Manufacturing Co. Inc. are in fact the infringing acts of the individual defendants.

[Paragraph 10 being the same as paragraph 9 of the original complaint, is here omitted.]

WHEREFORE, Plaintiff demands a preliminary and final injunction against further infringement by Defendants and those controlled by Defendants, an accounting for profits and damages, an assessment of costs against Defendants,

and such further or other relief as this Honorable Court may deem meet and proper.

(s) WALTER JAY SKINNER
Attorney for Plaintiff
82 Devonshire Street
Boston 9, Massachusetts

Of Counsel:
(s) ELLIOTT L. POLLOCK

ANSWER TO AMENDED COMPLAINT

Now comes the defendants, Aro Manufacturing Co. Inc., Mac Shapiro, George Shapiro, Harold R. Shapiro and John Raymond Hamlin, and collectively answer the amended complaint as follows:

It appearing that the amended complaint is in substance identical with the complaint as originally filed, the defendants above named herein incorporate as their answer to this amended complaint, to the same extent as if specifically recited the defendants answer as originally set forth together with the following additional answer:

Defendants collectively deny the allegations in Paragraph 8.

Defendants collectively deny the allegations in Paragraph 9.

Defendants collectively deny they received a letter indicating they were infringing Patent No. 2,569,724.

WHEREFORE, Defendants pray for the same relief as requested in the defendants original answer.

(s) EZEKIEL WOLF
Attorney for Defendants

Dated: July 27, 1956

REQUESTS FOR ADMISSIONS UNDER RULE 36 F.R.C.P.

Plaintiff, Convertible Top Replacement Co. Inc., requests Defendants, Aro Manufacturing Co., Inc., Mae Shapiro, George Shapiro, Marshall Shapiro, Harold R. Shapiro and John Raymond Hamlin, within ten (10) days after service of this request to make the following admissions for the purpose of this action only:

* * *

9. Aro Top Sales Co. applies for copyright registrations (a) A 93,701 of the year 1953, (b) A 153,997 of the year 1954, (c) A 185,671 of the year 1955, (d) A 187,676 of the year 1955, and (e) A 192,259 of the year 1955. Plaintiff's Exhibits M, N, O, P and Q are, respectively, certified copies of the foregoing applications for copyright registration.

10. Plaintiff's Exhibits R, S, T, U and V are copies of published works deposited by, or on behalf of, Aro Top Sales Co. in the Copyright Office of the United States.

11. The photostats which form a part of Plaintiff's Exhibits M, N, O, P and Q are copies of literature distributed by Aro Top Sales Co. to its customers.

12. The statements made in the applications for copyright registration, enumerated in Request for Admission 9, above, are true.

13. All of the statements made in the copyrighted literature, set forth in Plaintiff's Exhibit S, are true.

* * *

Respectfully submitted,

(s) WALTER JAY SKINNER

(s) PAUL V. POWER

Attorney for Plaintiff.

Of Counsel:

(s) ELLIOTT I. POLLACK

ANSWER TO PLAINTIFF'S REQUEST FOR ADMISSIONS UNDER RULE 36 FEDERAL RULE OF CIVIL PROCEDURE

9. Objected to.
10. Objected to.
11. Objected to.
12. Objected to.
13. Objected to.

ARO MANUFACTURING CO. INC.
By (s) MAX SHAPIRO, *Treas.*
(s) MAE SHAPIRO
(s) GEORGE SHAPIRO
(s) HAROLD R. SHAPIRO
(s) JOHN RAYMOND HAMLIN

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF SUFFOLK, SS.

Sworn to and subscribed before me this 16th day of August 1956.

(s) DAVID WOLF
[SEAL]. *Notary Public*

FURTHER ANSWERS TO PLAINTIFF'S REQUEST FOR ADMISSIONS UNDER RULE 36 F.R.C.P.

Requests numbered 5 to 13 inclusive—Yes.

ARO MANUFACTURING CO. INC.
By (s) MAX SHAPIRO
(s) MAE SHAPIRO
(s) GEORGE SHAPIRO
(s) HAROLD R. SHAPIRO
(s) JOHN RAYMOND HAMLIN

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF SUFFOLK, ss.

Sworn to and subscribed before me this 28th day of August 1956.

(s) DAVID WOLF
Notary Public

[SEAL]

REQUESTS FOR ADMISSION

Now comes Plaintiff and, under the provisions of Rule 36, Federal Rules of Civil Procedure, requests that Defendants and each of them, within ten (10) days after service of this request, make the following admissions for the purpose of this action only:

* * *

27. Neither Defendant Harold R. Shapiro, nor any of the other Defendants, has ever seen a 1952, 1953 or 1954 Ford or Mercury convertible automobile, or a 1952, 1953, 1954 or 1955 Lincoln convertible automobile, which has a folding top bearing a patent notice thereon indicating that said folding top is manufactured or licensed for manufacture under any U. S. patent.

* * *

30. The following statements made by Defendant Harold R. Shapiro are true:

"Q. [by Mr. Wolf] Mr. Shapiro, will use please name those cars of original manufacture which use wiper arms and cushion? A. 1952, 1953, and 1954 Ford and Mercury. 1952 to 1955, inclusive, Lincoln. * * *"

* * *

Respectfully submitted,

(s) WALTER JAY SKINNER
Attorney for Plaintiff

Of Counsel:

(s) ELLIOTT I. POLLOCK

INTERROGATORIES UNDER RULE 33, F.R.C.P.

Now comes Plaintiff and, under the provisions of Rule 33, Federal Rules of Civil Procedure, propounds the following further interrogatories to Defendants and to each of them:

10. Reference is made to the following statement appearing at pages 4-5 of Defendants' Original Answer in the instant suit: "* * * at the time of the sale of said Patent No. 2,569,724 to Automobile Body Research Corporation, substantially all automobile convertible tops and assemblies were being manufactured in accordance with Patent Nos. 2,549,153 and or 2,569,724 * * *."

Please list those automobile convertible tops and assemblies which were being manufactured in accordance with Patent No. 2,569,724 at the time of said sale of Patent No. 2,569,724 to Automobile Body Research Corporation.

* * *

Respectfully submitted,

(s) WALTER JAY SKINNER

Of Counsel: *Attorney for Plaintiff*

MOTION TO AMEND DEFENDANT'S ANSWER AND AMENDED ANSWER

Now comes the Defendants in the above entitled action and collectively move to amend the Defendant's answer by adding to paragraph ten (10) of said answer the following United States patents with said answer to be read as if these following patents were originally incorporated into the answer.

* * * *

No. 1,778,356	K. E. Coppock	October 14, 1930
* * *		
No. 2,046,574	J. A. Olivier	July 7, 1936
No. 2,065,027	B. S. Rinker et al	December 22, 1936

No. 2,074,620	A. Sa Couto	March 23, 1937
No. 2,185,581	M. Bessonneau	January 2, 1940
No. 2,289,173	F. C. Best	July 7, 1942

Respectfully submitted,
(s) Ezekiel Wolf
(s) David Wolf
Attorneys for Defendants
(s) Walter Jay Skinner
Attorney for Plaintiff

November 14, 1956
Aug. 22, 1958
Aldrich, J.
Allowed by agreement.
By the Court
(s) John F. Davis
Deputy Clerk

DEFENDANT'S ANSWER TO PLAINTIFF'S REQUEST FOR ADMISSIONS

Now comes the defendants in the above entitled action and collectively answer the plaintiff's requests for admission as follows:

27. Yes. To the best of our present knowledge.

30. Yes.

Abo Manufacturing Co. Inc.
(s) Mae Shapiro
(s) George Shapiro
(s) Marshall Shapiro
(s) Harold R. Shapiro
(s) John Raymond Hamlin

STIPULATION

Now come the parties to the above identified action and, through their respective attorneys, stipulate as follows:

H. A. Mackie and S. Duluk, U. S. Letters Patent No. 2,569,724, for "Convertible Folding Top with Automatic Seal at Rear Quarter" was issued by the U. S. Patent Office to General Motors Corporation, a corporation of Delaware, on October 2, 1951. Said General Motors Corporation, by virtue of an assignment dated December 30, 1953, duly recorded in the U. S. Patent Office at Reel 023, Frame 378, assigned the entire right, title and interest in and to said Letters Patent No. 2,569,724, to Automobile Body Research Corp., a corporation of Maryland. Said Automobile Body Research Corp., by virtue of a Territorial Grant, dated April 17, 1956, and duly recorded in the U. S. Patent Office at Reel 198, Frame 107, assigned and granted to Convertible Top Replacement Co., Inc., a corporation of Maryland, the right, title and interest in and to said Letters Patent No. 2,569,724, including rights to past infringement, for, to, and in the Commonwealth of Massachusetts.

Convertible Top Replacement Co., Inc., the plaintiff in the present action, has record title to said U. S. Letters Patent No. 2,569,724, by virtue of the aforementioned chain of title, for, to and in the Commonwealth of Massachusetts.

CONVERTIBLE TOP REPLACEMENT CO., INC.
By: (s) ELLIOTT I. POLLOCK
Dated: January 4, 1957 *Attorney for Plaintiff*

ARO MANUFACTURING CO., INC.
MAE SHAPIRO
GEORGE SHAPIRO
MARSHALL SHAPIRO
HAROLD R. SHAPIRO
JOHN RAYMOND HAMLIN
By: (s) DAVID WOLF
Dated: January 7, 1957 *Attorney for Defendants*

DEFENDANT'S ANSWERS TO PLAINTIFF'S INTERROGATORIES

Now comes the defendants and collectively answer the plaintiff's interrogatories under oath as follows:

10. Defendants are informed that there is a reasonable possibility the following automobiles having tops of original manufacture might be considered to read upon one or more claims of patent No. 2,569,724: 1952-1954 Ford and Mercury, 1952-1955 Lincoln, 1953-1954 Cadillac, Oldsmobile, Buick, Pontiac and Chevrolet.

ABO MANUFACTURING CO. INC.
(s) MAE SHAPIRO
(s) GEORGE SHAPIRO
(s) MARSHALL SHAPIRO
(s) HAROLD R. SHAPIRO
(s) JOHN RAYMOND HAMLIN

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF SUFFOLK, ss.

Sworn to and subscribed before me this 7 day of February, 1957.

(s) DAVID WOLF
Notary Public

[SEAL.]

MOTION FOR SUMMARY JUDGMENT

Now come the defendants in the above entitled case and move the complaint herein be dismissed on summary judgment under F.R.C.P. 56 on the grounds that the Convertible Top assembly made and/or sold or installed by the defendants for use in a combination allegedly patented by the plaintiff as set forth in patent No. 2,569,724 constitutes a repair of such patented combination, and not a reconstruction of the patented combination, or as alter-

nately stated the structures made and/or sold or installed by the defendants for use in combinations as set forth in patent No. 2,569,724 do not constitute an infringement of said patent in view of the fact that such structures are unpatented per se and the original structures in the patented combination are by their very nature perishable items which in the normal course of usage of the patented combination are expected to be replaced.

On the basis of the foregoing material, it is believed there is no material issue of facts between the parties and this case is proper to be disposed by way of a Summary Judgment without putting the defendants to substantial expenses of a trial.

ARO MANUFACTURING CO., INC. et als.
(s) DAVID WOLF
EZEKIEL WOLF
Attorneys for Defendants

ORDER
December 4, 1957.

ALDRICH, D. J.

Defendants' motion for summary judgment is denied. Because counsel have briefed and argued certain matters rather fully, and have invited comment, some observations thereupon are set forth in the accompanying memorandum. It is to be understood that these are partial, only; that some are obviously dicta, and none is necessarily final except as to the denial of the action. No further affidavits will be accepted.

By the Court
(s) ALDRICH
D.J.
By: (s) FRANCIS R. FOLEY
Deputy Clerk.

MEMORANDUM

December 4, 1957

ALDRICH, D. J.

In connection with defendants' motion for summary judgment I make the following observations and rulings.

The replacing of the entire fabric, if damaged locally only, instead of patching, or if faded or otherwise injured in appearance, even though such full replacement is not always done, is probably, on the record, because of the nature and purpose of the product, to be equated with replacing tops that are completely deteriorated.

The fact that only a small portion of the replaced fabric is covered by the patent does not enlarge defendants' rights, if any. If, by reason of a custom in the trade, the fabric is to be treated as a unit, it is for the burden and benefit of both parties.

The replacing of fabric merely to obtain a color change must, on the record, be so rare as to be disregarded as de minimis.

I will not rule as matter of law that replacing such a substantial item occasionally during the life of the car, even though expected and necessary, falls in the category of repair. A top, by nature, deteriorates. The fact that another portion of the invention, being of metal, is less perishable, does not necessarily mean that § 271 applies only to the longest-lived member. *Micromatic Hone Corp.* v. *Mid-West Abrasive Co.*, 6 Cir., 177 F.2d 934, is inapplicable. The design, or shape, of the fabric is an essential part of the invention, whereas that of the abrasive was not. I do not believe there is any automatic life-of-the-car rule for such a matter. If a substantial part of the invention wears out, replacement may be reconstruction rather than repair. See *Automotive Parts Co.* v. *Wisconsin Axle Co.*, 6 Cir., 81 F.2d 125, 127.

As to the agreement of July 21, 1955, I will not take parole evidence. I rule,

a) The agreement was a release and, in effect, future license, to the parties named as to all structures made before July 21, 1955, and all replacements installed before that date, and a license as to all new structures manufactured thereafter up to December 31, 1955, excepting replacements, without, apparently, and it seems immaterial, further payment of royalty; and

b) a license, on a royalty basis, of future replacements by Ford that come within the patent.

As to structures manufactured between July 21 and December 31, 1955, the defendants would not be liable for contributory infringement, if their conduct should be found to have been unrestrictable* repair, but as to replacements on structures manufactured before then they have any protection flowing from the agreement only as to replacements made after July 21st. I do not construe the agreement to release contributory infringers for rights of action already accrued.

On its face the agreement demonstrated an intention not to release persons like the defendants who had made replacements in the past or, as to the future, to approve replacements by anyone except Ford. True, it released all parties named, which did not include defendants, for past replacements, but this was incidental to its main purpose. It was not necessary, by any theory of circuity of action, to have the release extend to persons like the

* I accept defendants' contention to the extent that if conduct is *clearly* repair the patentee should not be permitted to require payment of further royalties therefor.

defendants retrospectively in order fully to protect the owners of cars and other named parties. I can think of no right of action defendants would have against them. I do not believe defendants are entitled to the fortuitous benefit of the old joint tort-feasor rule, the more particularly since they are the ones who, presumably, made profits from the contributory infringement. I doubt whether such profits would have been recoverable from the parties named and released in the agreement.

I agree with defendants that the situation is different as to replacements made after July 21, 1955. If the agreement is to convey to the parties named the full benefit outlined, it would be an empty thing if such parties could hang their clothes on a hickory limb, but not go near the water. If replacement is legitimate repair, no average owner can do-it-yourself, and he must be free to go to persons in the position of defendants without apprehension on their part. As to the past, they took their chances.

In sum, I do not presently find defendants protected anywhere by the doctrine of repair, and that doctrine will never help them as to 1952-54 Fords prior to July 21, 1955.

(s) ALDRICH
U.S.D.J.

STIPULATION WITH REFERENCE TO ACKERMANS PATENT NO. 2,549,153

Now come the parties in the above entitled Civil Action and stipulate that Plaintiff will not, at the trial of the above identified cause, attempt to carry the date of the invention described and claimed in Plaintiff's patent No. 2,569,724, back of the filing date of Ackermans patent No. 2,549,153.

July 1, 1958

(s) ELLIOTT L. POLLOCK
Attorney for Plaintiff

June 24, 1958

(s) DAVID WOLF
Attorneys for Defendants
EZEKIEL WOLF, WOLF & GREENFIELD
68 Devonshire Street
Boston 9, Mass.

FURTHER REQUESTS FOR ADMISSION BY DEFENDANTS

And now come the defendants and collectively under the provisions of Rule 36, Federal Rules of Civil Procedure, request that plaintiff within ten (10) days after service of this request make the following admissions for the purpose of this action only:

43. Attached hereto and labelled as exhibit 25[*] is a complete copy of an agreement entered into July 21, 1955, between Automobile Body Research Corp. and Ford Motor Company.

Respectfully submitted,
ARO MANUFACTURING CO., INC. et al
EZEKIEL WOLF
DAVID WOLF
Attorneys for Defendants

January 22, 1958

[* Exhibit 25 referred to, being the same as Defendants' Exhibit DD, infra Volume II, is here omitted.]

STIPULATION

Now comes the parties to the above identified action and, by their attorneys, stipulate that if appropriately qualified and informed persons associated with Automobile Research Corp. and General Motors Corp. were called to testify in the instant proceeding, they would testify as follows:

1. The General Motors' convertible top, with an automatic seal at the rear quarter, originated with Harry A. Mackie and Stanley Duluk, development engineers with General Motors Corp., in the year 1949. Said Harry A. Mackie and Stanley Duluk were granted U.S. patent No. 2,569,724 on their convertible top with an automatic seal; and the Mackie et al patent broadly gives a description of the mode of operation of General Motors' top.

2. John W. J. Ackermans submitted his original application Serial No. 666,413, which later matured into U.S. patent No. 2,549,153 for "Folding Top for Automobiles," to General Motors in the spring of 1946. General Motors advised Mr. Ackermans that it was not interested in his application. Mackie and Duluk, the patentees in U.S. letters patent No. 2,569,724 never saw the Ackermans original application which was submitted to General Motors in 1946; and no one ever communicated the contents of this Ackermans application to them. This application of Ackermans was also submitted in 1946 to other automotive manufacturers.

3. During the years 1946 to 1949 inclusive General Motors continued to manufacture and sell tops wherein the fabric in the rear quarter was secured on the outside of the automobile body. It was not until the middle of 1949 that General Motors began its development of the structure shown in the Mackie and Duluk patent which includes a top having an automatic seal in the rear quarter section. Mackie and Duluk, first, and two other General Motors

employees, namely Kenneth E. Coppock and Jesse D. Compton, secondly, worked on these tops over a period of time commencing in 1949, before the rear quarter seal arrangement which appeared on 1950 and subsequent General Motors cars was finally developed.

4. General Motors was granted the Mackie and Duluk patent No. 2,569,724. The General Motors structure of certain models utilize a fabric top, wiper arm, trough, folding bow mechanism and tonneau with the top secured to the trough below the body line and a wiper arm attached to the folding bow to press against the fabric, all as shown in the Mackie and Duluk patent. However, General Motors uses a weatherstrip in a pocket on the inner side of the fabric instead of a weatherstrip mounted on the body as shown in Mackie and Duluk; but at least some of the claims of the Mackie and Duluk patent do not specifically recite the weatherstrip as an element in the claims.

5. Automobile Body Research Corp., received approximately the following sums in the years 1955, 1956, 1957:

From	*1955*	*1956*	*1957*
General Motors Corp.		8000.00	6800.00
Ford Motor Co.	35000.00	6545.00	6485.34
Atlas International Co.	1000.00	5925.00	14900.00

Of these sums: General Motors paid nothing as a royalty for replacement top manufacture under the Mackie and Duluk patent since General Motors had reserved a royalty-free license for manufacture of such replacement tops under the Mackie-Duluk patent. General Motors did, however, pay royalties for the manufacture of replacement top fabrics under the Ackermans patent. Ford paid nothing in 1955, $212.00 in 1956 and $152.34 in 1957 as a license royalty for replacement top manufacture, the re-

mainder of the sums paid in these years being paid in accordance with the provisions of a release settling for past infringement. The sums paid by Atlas International company were license royalties for the manufacture of replacement top fabrics under the Ackermans and Mackie-Duluk patents.

6. The Ford Motor Company was not informed of the transfer of rights from Automobile Body Research Corp. to Convertible Top Replacement Co., Inc. because the agreement between Ford and Automobile Body Research Corp. did not contain a "most favored nations" clause.

7. Atlas International Co., Inc. was informed of the transfer from Automobile Body Research Corp. to Convertible Top Replacement Co., Inc. and ratified such transfer.

(s) ELLIOTT I. POLLOCK
Attorney for Plaintiff

(s) DAVID WOLF
Attorneys for Defendants
EZEKIEL WOLF, WOLF & GREENFIELD

STIPULATION

It is hereby stipulated by and between the parties that one or more claims of Ackermans patent 2,549,153 have been held to be infringed by United States Court of Appeals for the Fourth Circuit by the General Motors 1951 Chevrolet and that royalties are presently being paid to Automobile Body Research Corporation on replacement tops made specifically for 1950 to 1953 General Motors cars, 1952 to 1954 Ford Motor cars and the 1955 Lincoln.

(s) ELLIOTT L. POLLOCK
Attorney for Plaintiff

(s) DAVID WOLF
Attorneys for Defendants
EZEKIEL WOLF, WOLF & GREENFIELD

OPINION *

October 2, 1958

ALDRICH, D. J.

The plaintiff is the present owner of U.S. Patent #2,569,724, issued Oct. 2, 1951, for a "Convertible Folding Top [for so-called convertible automobiles] with Automatic Seal at Rear Quarter," hereinafter called Mackie-Duluk. The defendants manufacture, for replacement purposes only, the fabric portion of convertible tops, which they either install themselves or sell for installation by trimmers (a generic term for body shops, etc.) and an insignificant number of do-it-yourself car owners. These tops are custom-designed by make and year to effect accurate replacements on all standard American cars, and are so advertised. Included are all General Motors and Ford makes for the years 1952-1954, when (roughly) all of these cars were manufactured with Mackie-Duluk tops. The plaintiff claims infringement and contributory infringement. The defendants deny any infringement. They also assert invalidity of the patent.[1]

A convertible car is one which, as a general rule, appeals particularly to persons who are conscious of style or appearance. While from the standpoint of utility a top might last many years, in practice, because of fading, partial chafing and other relatively superficial wear, the fabric is usually replaced every three years, or even oftener. Thus the normal life of the fabric is several times less than that of the car. I regard as irrelevant the point made by the plaintiff that so many replacements are not really "needed." The fabric is obsolete when it

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* Not to be reported to West Publishing Co.

[1] They further assert full protection by virtue of certain releases or licenses given General Motors and Ford, which point I resolved against them on their motion for summary judgment, and see no reason to go into further. Finally, they claim mis-use of the patent, a defense I find clearly not made out.

no longer meets the generally accepted standards of its users. This principle applies also to plaintiff's contention that a top could be repaired by being patched, instead of being replaced. Convertible car owners do not like patches. The fact that tops "could" be patched is irrelevant.

Car manufacturers themselves have little interest in either manufacturing or replacing fabric tops. Consequently there has grown up a sizable independent top industry, of which defendants are locally, and perhaps nationally, leaders. They do not manufacture, or install, any metal parts, components, or adjuncts. Unlike the fabric, all such metal normally lasts the life of the car.

The most basic defense is invalidity. While a great deal of trial time was spent on this issue, with testimony extending to a French device that could not be explained, a folding baby-carriage top which lacked even superficial resemblance to plaintiff's, and prior patents whose similarities, if any, could be found only by speculation as to what may have been in the mind of the artist who made the drawings, defendants have raised no doubts in my mind on this issue. Their case is a striking example of attempting to argue backwards, in the light of the invention, that it was always obvious. They have not succeeded even in that. Mackie-Duluk was a substantial and enlightened step, filling a long-felt want, in a field in which defendants have produced, with one exception, only paper patents,[2] the most emphasized being foreign, which did not even purport to do what Mackie-Duluk accomplished.

[2] The exception is Ackermans, hereinafter discussed. Defendants also contend that Bessaneau was "reduced to practice," and that the "Bessaneau patents were embodied in commercial products." There were three Bessaneau patents. The only basis for these assertions was a French photograph of one car, as to which even defendants' expert could not identify which patent, if any, was reproduced. I have been shown no reason to disagree with plaintiff's expert's opinion that this was a custom-made and not a production model. It does not even appear whether it worked.

In 1950 the normal convertible car [3] had a power-operated folding top which could be raised and lowered without leaving the driver's seat. However, if a neat and weather-resistant fit was desired at the rear quarter (the area behind the side window where the top meets the tonneau), it was necessary to make a joinder or seal by manually snap-fastening the fabric to the outside of the tonneau at the so-called belt line each time the top was raised. These snaps could not be worked from inside the car, and therefore the top was not fully automatic. Furthermore, with the passage of time, the fabric was apt to change in shape at this area, affecting the fit. If the car owner chose to leave the fastenings unsnapped, the appearance of the car was damaged, the wind would blow in, and water might be admitted in substantial quantities. There was also a question of unauthorized manual access under the flap. Mackie-Duluk solved all of these difficulties.[4] For three years, until some further improvements, the nature of which has not been described, were made, the large majority of American convertibles were manufactured with this top.

Defendants have not attempted to show any other production top which offered Mackie-Duluk's features. Of the sizable number of prior patents introduced in evidence, none individually suggested such features in combination, and none even suggested them separately without substantial and, I believe, highly imaginative development. I do not deem individual analysis of most of them called for.[5] In addition to my various observations during the

[3] I disregard for all purposes, as indefinite and unsatisfactory, defendants' unsubstantiated oral testimony about some 1938 or 1948 cars.

[4] The matter of unauthorized access, at best an occasional matter of sales-talk, even though solved, I cannot regard very seriously.

[5] Since defendants make so much of the Bessaneau references I will say that I do not find there any teaching of a wiping arm (and if any of his patents effected what defendants contend was a seal (although

presentation of this evidence, I merely remark it seems to me that few, if any, of the suggestions of defendants' expert, whose qualifications I find to be minimal in the over-all aspects of the matter, should have been even discernable, let alone apparent, to persons skilled in the art, I further accept fully plaintiff's expert's testimony on the subject of impracticality. Frankly, I am surprised at this defense.

Mackie-Duluk brought the fabric from outside the tonneau at the rear quarter, inside. This in itself was not new. But they extended the flap down so that the bottom line was at the axis of rotation of the bows, and showed that here the fabric could be permanently affixed to the bow and the tonneau without ripping when the top was lowered or raised. Then, rather than affixing the fabric to the tonneau itself, they attached it to a trough, or gutter.[6] Water entering between the fabric and the tonneau would be directed into the trough, and carried out of the car by a drain. In order to reduce to a minimum the quantity of water thus admitted, Mackie-Duluk added a so-called wiping arm or bow inside, which pressed the fabric outward against the top of the tonneau at the belt line, thus effecting a seal. This arm served the additional purpose of keeping the fabric taut against the tonneau, counteracting wind or hand pressure. It also preserved appearance. The evidence contradicts what defendants underlined in one of their briefs, that the wiping arm "does not act as a guide or positioning member for the fabric."[7]

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he does not mention the subject), I believe it was not even as good a one as a Ford-without-cushion resulting from defendants' replacement, hereinafter discussed, which defendants urge me to find was not a seal at all.

[6] Claim 8.

[7] All quotations in this opinion except single words, are from defendants' briefs, and not from the testimony.

During the processing of this patent a discussion arose concerning the "seal" that the wiping arm was intended to effect at the body line. I have no doubt but that Mackie-Duluk wished this jointure to be as water-tight as practicable. Most of the discussion with the examiner was about the location, or the attachment, of a resiliant strip or cushion for this purpose. Mackie-Duluk finally omitted mention of this strip in many of the claims. I find, though, that whenever they spoke of a seal, however described, they still meant at the belt line, and one that was substantially tight. On the other hand, I disagree with defendants' contention that Mackie-Duluk claimed a seal "in order to generically claim the cushion." The strip is specifically mentioned in some claims, and conspicuously absent in others.

The only prior art requiring specific discussion is Ackermans, #2,549,153, April 17, 1951, a co-pending application which I find was processed by the same examiner. Among the differences noted by the plaintiff, Ackermans' flap did not come down far enough to fasten, and there was no wiper arm. Such seal as was obtained at the body line resulted only from fabric tension. This was not satisfactory even when new, depended upon more careful installation then could be expected in mass production, and deteriorated in use. Defendants point out that if the flap was extended further downward, permanently attached to a trough, and a wiper arm added, one would have Mackie-Duluk. They then seek to depreciate the importance of permanently fastening the fabric, with which I disagree. They add that it was "perfectly obvious to anyone" that Ackermans could be attached. Apparently it was not obvious to Ackermans. The fabric could not be attached unless brought down considerably further than Ackermans showed it. It was no more obvious that his flap, which came down half way to the axis line, could

be attached, than it was that the pre-1950 top, which came down none of the way, could be. As I remarked during the testimony, all that defendants say is that if Ackermans had designed Mackie-Duluk, he would have designed Mackie-Duluk. I do not find anything in Ackermans, or even any other prior art, which made Mackie-Duluk obvious or anticipated.

I pass to the question of infringement. This has two aspects. Some cars manufactured and sold with Mackie-Duluk tops were licensed. Others were not. As to the former, defendants are protected if their fabrics are to be regarded as mere repair, and not reconstruction. As to the latter, defendants have no protection against a claim for contributory infringement under §271 (c) if they made a material part, with knowledge that it was to be used in a patented structure, which was not a staple article of commerce suitable for substantial non-infringing use. All that can be said with regard to this last is that some of the fabrics manufactured by defendants for cars with Mackie-Duluk tops by happenstance may also fit some cars with other types of tops. This does not alter the fact that they are admittedly purposely designed for and advertised for, Mackie-Duluk tops. When parties attempt such a defense as this it is difficult not to apply the doctrine of noscitur a sociis with respect to others.

The defense of repair requires more consideration. The entire top consists of a complex bow structure, the fabric, the wiper arm and the trough, all attached to the body line of the car. Defendants point out that they replace only one of these items. This is true enough. However, the bows are standard, and not part of the invention. I disregard them, and also, of course, the car body itself. The wiping arm and trough are small, simple, and inexpensive pieces of metal, costing a twentieth or less.

the price of even the cheapest fabric.[8] It seems clear that if defendants replaced them along with the fabric, they would be reconstructing the patent, not repairing. Whether the test be that of substantial reconstruction, or domination of the part replaced, or frequency of replacement, I find that replacing the fabric is not permissive repair.

The matter which has given me substantial difficulty arises out of the seal, aforementioned, a partial defense. When defendants received notice of infringement they consulted counsel, who apparently advised them to substitute a "shingle" above, for the cushion at, the belt line. The defendants took his advice. I do not believe this substitution was made overnight, and that no cushion fabrics were sold following the receipt of the infringement notice. Furthermore, I find this shingle was an equivalent.[9]

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[8] With respect to defendants' further argument that even as to the fabric itself the only portion involved is the seal or flap at the rear quarter, it is interesting to note defendants' own evidence, which showed that Mackie-Duluk cars could have applied to them, without any structural change, by using snap-button receptacles already on the car for the boot, a complete, standard pre-Mackie-Duluk top with outside-the-tonneau snaps. In other words the car owner, and defendants in his stead, did not have to subject themselves to replacement royalties if they did not want to. I mention this not as being determinative, but as bearing on plaintiff's allegedly inequitable conduct in trying to be paid every time for a whole new top. If an owner does not want to replace with plaintiff's top, he does not have to. Defendants admitted it is even cheaper, and an easier installation, to replace with the outside-snap type than with a new Mackie-Duluk. However, this is not what defendants do.

[9] The shingle is somewhat similar in shape and attachment to the standard cushion, but is immediately above, rather than at, the belt line. It is no simpler or cheaper, affects no possible improvement, and serves the same purpose of effecting a seal at the belt line, as does the cushion. It would never have been adopted by defendants except as an attempt to avoid infringement. Nor would it function except in conjunction with the wiper arm, not only because the wiper arm presses the fabric over towards the belt line, but because it holds it firmly in position. I am aided in this finding of equivalency by the drawings (Fig. 2) and the specifications. Defendants' contrary argument might have more validity if the shingle were "well above" the belt line, but it is not.

However, defendants subsequently, in most instances, abandoned the shingle as well as the cushion. Since some cars had been originally manufactured with cushions, such replacements would normally result in leaving a gap of up to ½ inch at the belt line. Defendants contend that there was then no seal, and hence, as to such replacements, no infringement. In respect to this I make a number of findings.

1. As already stated, such a gap was not the "seal" described in the patent. This is so even though in fact the trough on General Motors and Ford cars proved capable of carrying off all the water which could pass through such a gap.

2. Mackie-Duluk did not disclose that their device would work with a substantial gap at the belt line. They did disclose, however, that it would function if some water passed by the belt line.

3. The omission of the cushion did not reduce normal chafing, or increase the life of the top. It did save a slight amount of cost. Defendants did not originally omit it for that reason.

4. There is no advantage to, and no reason to strive for, a top with a gap at the belt line, except as an attempt to avoid the patent, and it resulted in an inferior product, particularly with respect to appearance.

5. The statement that defendants "strive for . . . a gap," means only that they do so in an attempt to avoid a claim of infringement. There is no basis for their claim that with respect to them plaintiff is attempting "to harass the unwary."

6. The wiper arm on Ford and General Motors cars was adjustable. It is a relatively easy matter to move it over, and eliminate the gap, if one was occasioned by replacing a fabric without a cushion on a car which had

had one originally. (Not all had.) This is done not infrequently.[10]

7. It is not at all true that the omission of the cushion, even if the wiper arm is not adjusted and a gap results, admits as much water past the belt line as would pass if, in addition, the wiper arm were removed.

8. If there were no wiper arm and no permanent affixing to the trough defendants' top would be useless (unless cut down and affixed by snaps to the outside of the tonneau).

9. It is not true, as defendants imply, if not directly assert, that Mackie-Duluk showed the seal they did in order to meet a requirement of the Patent Office.

10. Even if Mackie-Duluk had described a device effecting only an over-all seal, as is presently accomplished in a Mackie-Duluk car originally adjusted for a cushion, with a defendants' replacement without cushion, and not readjusted, I would still have found valid invention over Ackermans, etc., and the file wrapper indicates no reason to suppose the Patent Office would have thought otherwise.

I find that defendants' tops without cushions, even when made for cars which originally had cushions, come within the principle of being merely imperfect, but none-the-less substantial infringements.

I will hear the parties further as to relief.

(s) ALDRICH
U.S.D.J.

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[10] I cannot accept defendants' testimony that all car owners are content with a ½" gap. I base my finding on Pickard's testimony, inclusion at the test demonstrating practice, and also on my own observation that such a gap is conspicuously unattractive, and inconsistent with defendants' testimony of the general frequency of replacements because of convertible owners' interest in appearance.

INTERLOCUTORY JUDGMENT
December 15, 1958

ALDRICH, D. J.

This case came on to be heard in August, 1958 and was tried in open court on August 19 through 22 inclusive, and on August 25 through 28 inclusive, and following argument by counsel the court, in an opinion dated October 2, 1958, made certain findings and rulings which are hereby reaffirmed. Thereafter, counsel having been unable to agree fully upon a form of decree, the matter was further argued by counsel, and it is this day ordered, adjudged and decreed as follows:

1. That U. S. Letters Patent No. 2,569,724, issued October 2, 1951 to Harry A. Mackie and Stanley Duluk for: "Convertible Folding Top with Automatic Seal at Rear Quarter" hereinafter called the Mackie-Duluk patent, is good and valid in law, as to claims 3, 4, 5, 7, 8, 9 and 10 thereof.

2. That plaintiff, Convertible Top Replacement Co., Inc. is, by virtue of a territorial grant, possessed of the right, title and interest in and to said Mackie-Duluk patent for, to and in the Commonwealth of Massachusetts, together with all rights of action for past infringement accruing since December 30, 1953, of said Mackie-Duluk patent in said Commonwealth of Massachusetts.

3. That the defendants, comprising the corporate defendant Aro Manufacturing Co., Inc. and the defendants Mae Shapiro, George Shapiro, Marshall Shapiro, Harold R. Shapiro and John Raymond Hamlin, individually and as a co-partnership doing business as Aro Top Sales Company, have infringed or contributorily infringed claims 3, 4, 5, 7, 8, 9 and 10 of said Mackie-Duluk patent by making, selling, installing and inducing the sale, installation, and use of certain replacement top fabrics for convertible top automobiles designated by defendants as their

part numbers 134, 224, 225, 226, 227, 228, 231, 233, 234, and 509."

4. That plaintiff Convertible Top Replacement Co., Inc. recover of the corporate defendant Aro Manufacturing Co., Inc. and of the individual defendants Mae Shapiro, George Shapiro, Marshall Shapiro, Harold R. Shapiro and John Raymond Hamlin, damages adequate to compensate for the infringement, but in no event less than a reasonable royalty, together with interest and costs as fixed by the Court.

5. That this cause be referred to William R. Hulbert, Esq., as Master to ascertain and take and report to the Court an account of said damages. Inasmuch as there may be questions of law as to whether certain acts constitute infringement or contributory infringement in Massachusetts for which plaintiff may recover under its limited grant, the Master shall report such facts as will assist the Court in making the appropriate rulings. The Master shall, in the course of taking said account, take evidence to assist this Court in determining whether, and/or to what extent, replacement top fabrics of the type presently identified by defendants as their part number 232, shall be included in said account, and in the injunction to be issued out of this Court.

6. That a perpetual injunction be issued out of and under the seal of this Court restraining the defendant Aro Manufacturing Company, Inc., and the several individual defendants aforesaid, and each of them, as well as their officers, agents, servants, employees, and each of them:

(a) From directly or indirectly making, using or selling or causing to be made, used, or sold, in the Commonwealth of Massachusetts, structures embodying the invention disclosed and claimed in claims 3, 4, 5, 7, 8, 9 and 10 Mackie-Duluk U. S. Letters Patent No. 2,569,724;

(b) From directly or indirectly inducing infringe-

ment, in the Commonwealth of Massachusetts, of claims 3, 4, 5, 7, 8, 9 and 10 of said Mackie-Dubi U. S. Letters Patent No. 2,569,724; and

(c) From directly or indirectly selling, in the Com monwealth of Massachusetts, convertible automobil replacement top fabrics of the types presently identi fied by defendants under their part numbers 134, 22 225, 226, 227, 228, 231, 233, 234 and 509, or th equivalent of any of them.

7. That plaintiff recover from defendants the costs o the action, to be taxed by the Clerk. The compensatio of the Master, at the rate of $100. a day shall, unles otherwise agreed, be included in said costs. Prior to fin taxing the Court will determine whether additional cos shall be imposed pursuant to the provisions of 35 U.S. § 284.

By the Court,
(s) FRANCIS R. FOLEY
Deputy Clerk

(s) ALDRICH
U.S.D.J.

NOTICE OF APPEAL

Notice is hereby given that Aro Manufacturing Co., In and Mae Shapiro, George Shapiro, Harold R. Shapir Marshall Shapiro and John R. Hamlin copartners d/ Aro Top Sales Co. Defendants aboved-named, here appeal to the Court of Appeals for the First Circuit fr the judgment entered in this action on December 15, 1

ARO MANUFACTURING CO., INC., et
By: (s) DAVID WOLF
EZEKIEL WOLF, WOLF & GREENFIE
Attorneys for Defendants

January 13, 1959.

MEMORANDUM AND ORDER
February 16, 1959

ALDRICH, D.J.

Defendants' objections to interrogatories raise the perennial question of who shall do the work entailed in an accounting for damages in a suit for patent infringement. There are, of course, cases all around this question. Before making any specific rulings I think it is appropriate to view the frame of reference in which the question presently arises. In the first place, the case has already been fully tried, to the point of findings that the patent is valid and infringed. Defendants have appealed the issuance of an injunction. They have not been able, or willing,—I am not at all clear which—to post a supercedeas bond so far as damages are concerned. The matter of accounting has, accordingly, been referred to a master. Prior to the commencement of such hearing the plaintiff filed interrogatories addressed to the subject of damages. The defendants have objected to every one on the ground that the information is equally available to the plaintiff. This availability, so far as it exists, is the result of defendants now stating that plaintiff is free to examine defendants' books and records.

Until this moment plaintiff has never had access to defendants' books. On the other hand, defendants have felt free to testify to certain conclusions, then favorable to themselves, which they appeared to have drawn from their books. Thus defendant Harold Shapiro, testifying at the trial, stated in response to questions from his own counsel, (so that it is not to be assumed that he was unprepared for the inquiry,)

"Q. I further believe you indicated there are approximately 140 different models you offer for sale. Could you tell me with that background what percentage of the 140 models volumewise are constituted

by the seven models of which the plaintiffs complain? A. I would say today about 75 or 80 per cent.

Q. Of your total business? A. Yes."

One will note the word "today." This referred to August 21, 1958.

In December, 1958, when the question of damages became paramount, plaintiff filed a demand for admission of facts to the effect that the said testimony was true. Defendants answered as follows.

> "Denied.—The 75% to 80% figure mentioned by the witness was more applicable in 1956. At the time this answer was given, the witness had in mind figures which were estimated originally in 1956, when the percentage was substantially greater than at the time the testimony was given. It was not until an actual spot check, by the Defendants, of the actual percentage that it was fully realized that the percentage was much lower. The actual spot check indicates approximately 22% of the Plaintiff's manufacture comprises the seven models in question."

This answer was executed by the same Harold Shapiro. One will note the phrase "more applicable in 1956," and the statement that it was not until a spot check that he "fully realized" the percentage was "much lower." It is apparent from all of defendant's testimony that this percentage decreases as time progresses, and that no one knows, and knew, this better than Shapiro. Under the circumstances, in the light of this carefully phrased answer, which does not say that 75-80% was correct even in 1956, or that he "fully" thought so, I find it difficult to believe that Shapiro's testimony on the stand was not reckless, or worse.

Another matter. At the outset of the case plaintiff filed interrogatories in which it asked a number of questions about "any literature, advertising material or instruction

sheets relating to said replacement fabrics" issued or caused to be issued by any defendant. The defendants answered that none had been. At the trial plaintiff produced price lists which advertised particular tops for each make and model of convertible cars, and various other advertising material. It further showed that for each of three years particularly in question the defendants had had this advertising and descriptive material formally copyrighted. No satisfactory explanation, indeed, as I recall it, no explanation at all, has been offered to account for these answers to interrogatories.

Finally, I believe it is at least implicit in my opinion on the merits that there were various matters in defendants' briefs which clearly should not have been there.

In sum, the court approaches the present question with its mind sufficiently pre-occupied with thoughts about 35 U.S.C.A. §285 for the entire case to impede receptivity to defendants' contention that answering interrogatories will put them to expense. Defendants' frequently repeated argument that it is "up to plaintiff to prove its case," does not have a highly convincing ring coming from one who has shown that this contention adds the further qualification, "including the proving false of irresponsible statements made by the defendants."

The defendants are ordered to answer the following interrogatories within 20 days: 15, 16, 17, 18, 20, 25(a) and (b) and, to the same extent, 26, 27 and 28. They are ordered to answer the following interrogatories as promptly as possible: 19 and 23. No ruling at present is made as to the remaining interrogatories. If the defendants do not comply with the above order plaintiff may move for contempt proceedings.

(s) Aldrich
U.S.D.J.

DEPOSITION OF GEORGE SHAPIRO
August 28, 1956

* * *

[8] Q. Now, Mr. Shapiro, I again refer you to this schedule on the right-hand side of page 1, Plaintiff Exhibit S. You will note under the heading "Construction" you state that the top is "identical in design with original top." How do you make sure that the top is, in fact, "identical in design"? A. Well, identical in design I think is a broad statement which means it has to fit the contours of the body and where it has to be fastened to the top [9] equipment which is on it.

Q. Then when you use the term "identical in design" you actually mean that the top, that your replacement top fits as well as the original top and performs functions as well as the original top? A. That is right.

Q. You say your answer is Yes? A. That is right.

* * *

[15] Q. Were any tests conducted with the top that had both the cushion and flap eliminated to see how well it kept water out of the car? A. Yes, we made tests.

* * *

Q. Do you have personal knowledge of the results of these tests? A. Yes, they were good.

Q. Do you mean by that that they did keep water out of the car even without the cushion and the flap on it? A. Well I would say it did, yes.

Q. Then you would say that the top, even without the cushion and [16] without the flap, still functions effectively to keep water out of the car? A. That is right.

Q. You stated before that the elimination of the cushion and the substitution of the flap was made after you received a letter from Mr. Hall, and it was on the advice of your counsel? A. Yes.

Q. Who made the decision, actually, to remove the flap A. Harold Shapiro.

Q. That was his personal decision? A. Yes.

Q. Would you say it was because he felt the top worked just as well without the flap? A. Yes.

* * * *

[17] Q. Now, isn't it also true around 1950 General Motors came out [18] with a new convertible top which had an automatic sealing feature near the rear quarter so that people did not have to get out of the car to snap buttons or hook channels? A. Yes.

Q. Could you very briefly describe for the purposes of the record how this improved sealing feature worked in, say, 1950 and subsequent General Motors cars? What was it about the top which permitted this elimination of the function of snapping or channeling, or the like? A. The way it was secured to the body.

Q. Now, would you say it was because the fabric came inside the car near the rear quarter and secured to the body adjacent or beneath the belt line at that portion? A. Would you repeat that?

Mr. Pollock: Will the reporter read the question?

[Question read.]

Q. And was secured to the inside of the car beneath the belt line? A. Yes.

Q. In 1952, Ford, Mercury and Lincoln cars also came out with an automatic top which had this automatic sealing feature, and again that particular Ford top was secured near the rear quarter to the inside of the car below the belt line? Would you agree with this statement? A. Yes.

Q. Your answer is Yes? A. Yes.

* * * *

[19] Q. Now, the fabrics that came out in 1950 and subsequent in the General Motors cars had a cushion. Would you consider with your experience with convertible tops

that cushion was fairly important in the General Motors car? A. No, not necessarily.

Q. In the 1952 and subsequent Ford cars they had a cushion in them? [20] A. Yes.

Q. Would you consider the cushion in these Ford convertible tops was fairly important? A. Not necessarily.

DEPOSITION OF HAROLD R. SHAPIRO

October 4, 1956

[3] Q. Exactly what is a pattern maker, what are your duties? A. Well, among other things, pattern making is building a top from scratch on the existing frame of the car, putting it on paper, and getting it prepared for the cutters and to go into production.

Q. When you say building a top from scratch, do you mean by that that you make a specific pattern for a specific car and model, and that pattern is for that car and model? A. That is right, providing the same frame. If the same frame is applicable to another model, say Chevrolet and Pontiac, of course the [4] same top would fit both cars.

Q. Getting specific, in our case here? A. It is a custom tailored pattern. In other words, one top won't fit all cars.

Q. I see. In our case, your top 134, for instance, which is for the 1952, 1953 and 1954 Ford? A. And Mercurys.

Q. Excuse me. That particular top will fit those cars? A. Yes.

Q. But, as I understand you, it will not fit, for instance, General Motors cars? A. It was not specifically designed for those cars.

Q. Then you would say, as I understand you, your top No. 134 was specifically designed for the 1952, 1953 and 1954 Fords and Mercurys? A. Yes.

[7] Q. Now, Mr. Shapiro, I would like to invite your attention for a moment to some of the literature which was discussed with your brother, George Shapiro, and with Mr. Hamlin, during the previous depositions, and I merely invite your attention to the statements we mentioned at that time, and ask on whether or not you agree with the accuracy of those statements. In particular, I am referring to Exhibit A-B marked for identification, and you will note that under the heading "Design" it states that your various tops are custom tailored for each car and model. You have already used that term, in fact, in your earlier testimony. Would you agree that statement is correct, that your tops are custom tailored for each car? A. Yes, they are.

• • •

[8] Q. Under "Construction" you stated that the top is "identical in design with the original top." Do you agree with that statement? A. From outward appearance.

Mr. Wolf: Would you read that question again?

The Witness: From outward appearance, yes.

[Question read.]

Q. When you say outward appearance, what do you mean by that? A. Or design, not construction.

Q. You would say the shape, perhaps, is the same? A. That is right.

• • •

[13] Q. Your part No. 134 is for the 1952, 1953 and 1954 Ford and Mercury? A. Yes.

Q. Now, as I understand it, the part No. 132 which is for the 1951 Ford could not be installed, then, on a 1952, 1953 or 1954 Ford? A. We would not.

Q. I see. Is that because of some difference in the shape or construction? A. Yes.

• • •

[14] Q. As I recall your statement, you, being the pattern

maker, made definite patterns for each of those particular models? A. That is right.

Q. And I assume they differed again from the No. 134? A. Yes.

Q. So that each of these particular tops were made for very specific cars? A. Yes.

[18] Q. Now, I would like to ask you, if I may, about these various patterns that you make, and so forth. As I gather from reading the brochures, the main purpose in having so many different part numbers for all these different cars is that these various car frames do differ from one another, and they all require special shaped and designed tops to fit on a specific frame; is that correct? A. That is correct.

Q. Therefore, these various number parts designate specific tops made for specific cars? A. That is right.

Q. Just as your part No. 134 is made for the 1952, 1953 and 1954 Ford? A. That is right.

Q. And Mercury? A. Yes.

Q. Now, just as background material, I invite your attention to an exhibit which has been marked for identification as Plaintiff Exhibit S, and this particular exhibit is already the subject of certain requests for admission which have been answered, and you will note that on the first page of this particular brochure in a sort of certificate arrangement, it states here, "Aro tops have an accurate pattern for every convertible [19] model from 1928 on, insuring custom tailoring and precisional fit." A. Yes.

Q. Would you say that is an accurate statement? A. Yes.

[35] Q. Why is it you had to make a special pattern for the 1955 Ford when you had your parts 134 for 1952, 1953 and 1954? A. The shape of the car and the size of the car and the fastening of the car. It is different.

[37] Q. Perhaps I can clarify it. I realize the question is perhaps vague. Would you agree, first of all, your number part 134 was designed to be installed in a 1952, 1953 or 1954 Ford in a manner quite similar to the way the original equipment was installed on that car in that it was fastened to the trough, fastened on the rear, fastened to the pillar, and so forth? A. Yes.

[43] *Cross-Examination*

[49] XQ. Now, will you please summarize those cars which in their original manufacture used wiper arms of the general type shown in the patent owned by the plaintiff and subject to the present civil action? A. 1952, 1953 and 1954 Ford and Mercury, and including 1955 Lincoln. Is that plain enough?

XQ. 1952 to 1954 Ford and Mercury, and 1955 Lincoln? A. Yes. [50] This is just the wiper arm?

XQ. That is right. A. 1950 to 1953, inclusive, General Motors and including 1954 Chevrolet and Pontiac.

[68] XQ. In that particular shingle construction, I take it the shingle rests on top of the body line and not between the wiper arms? A. Body line, or pulled down tight resting on top of the body line.

XQ. In those structures where the shingle is above the body line [69] and water runs slowly down the shingle, is it possible for the water to follow the contour of the shingle, go around it and go to the trough? A. Not generally. I have watched it in my own car.

[78] Mr. Pollock: I wanted to clarify the question. The witness has testified, as I understand it, that even if they would put a top, that top 134 onto a Ford car without a

cushion or a flap, it would still keep the water out of the car? A. It is still watertight. The material is still one piece going down to the trough.

Mr. Pollock: It is still watertight?

The Witness: Oh, yes.

DEPOSITION OF HAROLD ROBERT SHAPIRO
February 20, 1957

[2] The purpose of the deposition is to make certain tests with reference to certain replacement top installations manufactured by the defendant. These tests will be conducted with reference to two cars, a 1953 Ford and a 1953 Oldsmobile. Both of these cars have had their convertible top fabrics replaced with a replacement installation of the defendant. It is my understanding that these replacement tops have been on the cars for some time.

The tests in essence will be as follows: We will conduct tests in which we will demonstrate and take photographs of two automobiles with the wiper arms portion of the construction in place and the tops in a raised position. Also we will take photographs for comparison purposes with the wiper arms removed. In both instances I will ask the witness to demonstrate by suitable means the space which occurs between the fabric and the body line of the car. We will also run water over the tops of both [3] of these installations to demonstrate the effect of water passing over that portion of the car between the body line and the fabric.

I will also ask the witness to identify and clearly mark certain exhibits which comprise the entire kit or unit which the defendants manufacture and sell for replacement parts installation on the Ford car, and also, I think, on a General Motors type car.

I will also ask them to produce comparable kits which they sell for installation on cars which the plaintiff has indicated by interrogatory do not infringe the claims of the patent in question. Specifically I would like to have produced and compared a kit for a 1951 Ford.

* * *

Q 1. [By Mr. Wolf] Mr. Shapiro, will you please give your name and address? A. Harold R. Shapiro, 5 Cynthia Road, Newton Center, Massachusetts.

* * *

[4] Q 3. With respect to the two model cars on which we will conduct demonstrations, will you please identify them? A. One car is a 1953 Ford and the other is a 1953 Oldsmobile Super 88 Convertible.

Q 4. Will you please tell me what type of convertible tops are on those two cars? A. The tops that are on both cars were made by the Aro Manufacturing Company and installed by our own personnel.

Q 5. First taking the Ford automobile, how long ago was that top installed? A. That top was put on early last fall.

Mr. Pollock: By "the top," is that a part No. 134 such as we have been identifying in the other depositions?

The Witness: Yes. Exact in its structure as we are making as of today.

[5] Q 6. With respect to the Oldsmobile automobile, will you tell me first what part number you are using on it? A. That is part No. 231.

Q 7. When was that top installed? A. That top was installed late last winter.

Q 8. Will you describe in connection with the Ford top, 134, whether or not it has a cushion or frankfurt, as you might call it, or, alternately, a shingle of smooth surface between the fabric and automobile body line of the car?

A. On the part No. 134 the construction is a smooth piece of fabric running between the body and the wiper arm.

Mr. Pollock: Down to the trough?

The Witness: Down to the trough and fastened with prongs and screws.

Q 9. With respect to the Oldsmobile, will you tell us, please, the type of fabric construction between the wiper arm and body line of that car? A. The construction is really a shingle above the body line and a single piece of fabric between the body and wiper arm.

Q 10. What do you mean by shingle? A. Shingle is a smooth roll of material approximately a half inch in diameter, stitched in a certain way as to act as a bumper for any water.

[6] Mr. Pollock: You mean a deflector?

The Witness: A deflector for any water coming down the side quarter material and deflecting it away from the body.

Q 11. Now, since the installation on both of these cars, can you tell me whether you have altered or tampered in any respect with either of the automobile convertible top equipment? A. No.

[Taking of the deposition adjourned to another part of the premises.]

Mr. Pollock: Would Mr. Shapiro please identify where we are, and so forth?

The Witness: You mean this room?

Mr. Pollock: Yes.

Mr. Shapiro: I will locate it in the Aro Top Sales trim department where a number of tops are installed on cars.

Mr. Pollock: It is sort of a garage, isn't it?

The Witness: That is right.

* * *

Q 12. Now, Mr. Shapiro, we are now looking at an automobile; I take it this is— A. A 1953 Ford. No. 134.

[7] Q 13. All right. I think it would be a good idea to have a photograph taken of the top and identified as Exhibit 4. Will you please indicate whether or not the wiper arm is in position in this particlar model? A. Everything is in position the way the car came from the factory.

Q 14. From the factory? A. The framework is not tampered with at all.

Q 15. Will you indicate what is the rear quarter?

[The witness indicates.]

Q 16. On this Exhibit 4, Mr. Shapiro, would you please indicate that portion of the car which indicates—what is that [indicating]? A. This is the rear quarter side quarter section.

Q 17. —the rear side quarter section?

[The witness indicates.]

[Photograph EXHIBIT 4 is taken by the Photographer.]

Q 18. In Exhibit 4-A, will you please insert, if possible, your small finger into the space between the fabric and the body line of the automobile?

Mr. Pollock: Would you insert it as far as you can?

[Witness indicates.]

[Photograph EXHIBIT 4-A is taken by the photographer.]

[8] Q 19. Could you estimate the space, Mr. Shapiro, between the fabric and the body line of this particular model? A. I would say one-half inch.

Mr. Pollock: Could you get a ruler?

The Witness: Yes.

A. [After measuring] About three-eighths of an inch.

Mr. Pollock: Mr. Shapiro, you are measuring now and would you measure at various locations?

The Witness: At the extreme rear the dimension would be 5/16ths, and at the extreme front it would be 5/16ths, and at the center it would be 3/8ths.

Q 20. Now, Mr. Shapiro, could you remove the wiper arm from this particular model? A. I will get one of my trim men to do that.

Mr. Pollock: Would the reporter note that one of Mr. Shapiro's helpers has disconnected the wiper arm which was in place during the taking of Exhibit 4 and Exhibit 4-A and that it has now been displaced and it is loose?

Q 21. Mr. Shapiro, will you please indicate what has transpired since Exhibit 4 and 4-A have been taken? A. Our trim man has disconnected the wiper arm from the body.

Q 22. Where is the wiper arm located? A. The wiper arm is located adjacent—parallel to the body line, connected [9] front and back.

Q 23. Would you please stand in substantially the same position you were in when picture Exhibit 4 was taken?

Mr. Wolf: I will ask the photographer to take a picture of this as Exhibit 5.

[Photograph Exhibit 5 is taken by the photographer.]

Q 24. With your ruler will you please measure the depth now without disturbing the fabric and indicate to the reporter the measurements you have taken? A. The measurements are the same.

Mr. Pollock: Really?

The Witness: It was 3/8ths on the other one.

Mr. Pollock: How about at the back?

The Witness: Just a hair over [measuring].

Q 25. Will you please indicate so the reporter can record it? A. The measurements are the same.

Q 26. Now, without disturbing the fabric will you please insert your finger in the same position that you had it before? Or will you please insert your finger as far as you can without moving the fabric?

[The witness does so.]

Mr. Wolf: Now will you take a picture and identify that as Exhibit 5-A?

[Photograph Exhibit 5-A taken by the photographer.]

[10]. Q 27. Now I will ask that you re-install the wiper arm in the same position that it was before. At the request of Mr. Pollock, to make the record complete, I will ask you to insert your hand as far as you can with your fingers, as far as you can, with the wiper arm removed. A. Pushing the material?

Q 28. Yes, pushing the material.

Mr. Pollock: Put your hand down as much as you can.

[The witness does so.]

* * *

Mr. Wolf: I will ask the photographer to note that as Cross-Exhibit 1.

[11] [Photograph Cross-Exhibit 1 is taken by the photographer.]

Q 29. Now, Mr. Shapiro, will you please measure the space as well as you can that now appears? A. It is a half inch at the point where my hand was in as far as it goes.

Mr. Wolf: I would like the court reporter to note that the top has not been touched since Mr. Shapiro has removed his hand.

Mr. Pollock: Is the wiping arm back in place?

The Witness: No.

* * *

A. [Continuing] At the point where my hand was inserted and the material pushed in is one-half inch.

Mr. Pollock: In other words, I just want to make this point clear, in other words, you are saying without the wiper arm in there you put your hand in and removed it so the top is sprung back by its inherent resiliency and it is now a one-half inch space?

The Witness: That is right.

Q 30. Now, will you put the wiper arm back in place?

• • •

[12] Q 31. Mr. Shapiro, now indicating the rear quarter in the area above the wiper, in the area above that portion of the fabric in which the wiper arm is located, will you please indicate whether or not you find any substantial difference between the tension of the fabric whether the wiper arm is or is not in place? A. I will have to wait until the wiper arm goes back.

Q 32. Will you test it now? A. I have tested it.

Q 33. Will you please replace the wiper arm?

[The wiper arm is replaced.]

Q 34. Now, the wiper arm has been replaced; will you please examine it in the same location? A. I would say very little or no amount of looseness.

• • •

[13] Q 36. Are you saying that comparing the top with the wiper arm in place and without the wiper arm in place there is a greater looseness with it not in place or there is no substantial difference? A. No substantial difference.

Q 37. Apply it from this point [indicating], Mr. Shapiro. Do you occasionally test the effect of water on convertible tops when they are installed? A. Very often.

Q 38. How do you normally conduct such tests? A. By filling a pail with water and saturating a sponge and squeezing it above the belt line and watching the water drain out through the drains, and to be sure that none of it goes in the car.

Q 39. Have you found that test which you have just described to be effective? A. Yes.

Q 40. Would you please take a sponge and conduct that same test, applying the water above the body line of the car at approximately an area maybe a foot above the body line [14] directly at the center of the rear quarter of this particular model?

Mr. Wolf: And I would request the photographer take a picture of this, after the water has passed this point [indicating], which will be Exhibit 6.

[The witness indicates.]

[Photograph EXHIBIT 6 is taken by the photographer.]

Mr. Wolf: For the purpose of the record I would like to indicate that a few drops of water had fallen on the fender of the car as Mr. Shapiro was applying the sponge to the top, and while he was moving the sponge over the fender and those drops of water were removed prior to the taking of the photograph.

Q 41. Now, Mr. Shapiro, will you please indicate where the water which ran down the top flowed to? A. It flowed down the top into the drain gutter inside the body line and consequently out through a hole at the bottom of the body put there for that particular purpose.

Q 42. I take it the puddle of water which appears below the car at approximately a point underneath the rear seat or rear floorboard is the water which has drained from the top? A. Yes. There is also one back here [indicating], but the car is pitched in such a way that it did not—

[15] Q 43. Do you see any water which has flowed over the body line and over the outside of the fender? A. No.

Q 44. I would like to turn to the other model car which we have here; will you please identify this? A. This car is a 1953 Oldsmobile 88 Convertible, Aro Part No. 231.

Q 45. Will you explain the differences between this structure and the structure we have just considered? A. The difference between this model is that it incorporates a shingle and a wiper arm.

Q 46. What is the function of the shingle? A. The shingle is a deflector of water, deflector of water—well, a deflector of water, period.

Mr. Pollock: What is it deflected from and to?

The Witness: It is a deflector of water coming from the top to entering the car.

Mr. Pollock: You mean it keeps it from entering the car?

The Witness: That is right.

Q 47. With respect to this shingle, can you please tell me its location? A. It is located at the rear side quarter, at the bottom of the rear side quarter from the rear of the side quarter window to where the top tacks on the outside of the car.

[16] Q 48. Is it above or below the wiper arm or on a level with the wiper arm? A. I would say it is a little above the wiper arm.

Q 49. Could you tell me whether any portion of that shingle is located between the wiper arm and the body line of the car? A. No portion is between the wiper arm and the body line of the car.

Q 50. Will you please take a ruler, if necessary, and estimate the space between the body line and the fabric in a position just below this shingle? A. I would say a distance of about 1/8th of an inch. It is a quarter there [indicating], and about 4/16ths—3/16ths in the front and 1/4 inch in the rear.

Q 51. Could you tell me whether or not that space is sufficient to permit free passage of water which might roll past the shingle? A. Yes.

Q 52. I just asked you what the function of the shingle was; will you tell me whether or not the shingle functions at all to form a watertight seal? A. No.

Mr. Wolf: I would like the photographer to please take as Exhibit 7 a photograph of this particular top with Mr. Shapiro indicating the shingle.

Mr. Pollock: Will you put your finger on it?

[The witness indicates.]

[17] Q 53. I would prefer to have your finger on it.

[The witness indicates.]

[Photograph EXHIBIT 7 is taken by the photographer.]

Q 54. Now, Mr. Shapiro, can you hold that shingle up in such a position as to indicate and illustrate the space contained between the fabric and the body line? A. Yes [indicating].

Mr. Wolf: I will ask the photographer to please take as Exhibit 8 a photograph.

[Photograph EXHIBIT 8 is taken by the photographer.]

Q 55. Now, Mr. Shapiro, I will ask you to have the wiper arm on this particular model removed.

* * *

A. The wiper arm is removed.

Mr. Wolf: I will ask the photographer to take as Exhibit 9 a view substantially the same as Exhibit 7.

[18] Q 57. Will you put your finger on the shingle in the same manner you had it before?

[The witness indicates.]

[Photograph EXHIBIT 9 is taken by the photographer.]

* * *

Q 58. Will you please test the area above the wiper arm of the fabric and tell me if you notice any substantial difference with the wiper arm removed from the tension and appearance when the wiper arm was in place? A. There is no difference in appearance.

Q 59. How about any substantial difference in tension? A. I would say by testing here [indicating] there would not be. If I tested it here [indicating] there would be a little.

Mr. Pollock: You say there would be a little difference

in tension when you tested down near where the clamp should be?

The Witness: That is right.

[19] Mr. Pollock: Did you conduct that same sort of test on the other car?

The Witness: Yes.

Q 60. Would you consider that difference to be substantial or not? A. No.

Q 61. No. A: No.

Q 62. Mr. Shapiro, with respect to applying water to this particular model, could you tell me whether or not water which may fall on the car and be driven by a driving wind storm or rain falling at an angle, would that water pass between the fabric and the body line? A. Yes.

Q 63. Do you have water to demonstrate? A. Yes.

Mr. Wolf: Will you take a picture now of Mr. Shapiro applying the sponge test to this particular model?

[Photograph EXHIBIT 10 is taken by the photographer.]

Q 64. Mr. Shapiro, would you please examine the fabric and lift the shingle, and will you tell me whether or not water has passed down under the shingle and between the body line and the fabric? A. Yes.

Q 65. Where did that water go to? A. Out through the normal drains of the car and out through the body, the bottom of the body.

Mr. Wolf: For the purpose of the record and perhaps [20] to save Mr. Pollock from some questions later on, I will indicate that not all the water passed between the fabric and the body line, but some of the water was shed off the shingle and outside of the car on the outside of the fender. Is that a fair statement?

Mr. Pollock: Yes. Would the witness agree to that statement, too?

The Witness: Yes, depending on the rate of flow.

Mr. Pollock: What do you mean by that?

The Witness: If I squeeze the sponge fast I could make it so nothing would go in. If I squeeze it slow, more will go. Do you see?

Mr. Pollock: As the volume of flow increases, less and less gets inside?

Mr. Wolf: I would like to indicate for the purpose of the record that the witness took a sponge and squeezed a large quantity of water from the sponge on to the car but I would also like to note that there was a substantial quantity which did pass between the body line and the fabric.

Mr. Pollock: I object to the term "substantial quantity." I will admit that there was some water which got in there, but I cannot compare it.

Q 66. Would the witness please indicate? A. Let us do it [21] again [indicating]. At least as much went in as went out.

Q 67. With that added quantity? A. Yes.

Q 68. Would you please indicate on the floor the pool of water which has accumulated from water passing inside of the car and between the fabric and body line? A. There is a drain here [indicating] and here [indicating] and also one down here [indicating], but these are normally the same drains if your windows are up the water goes through and goes through the drain.

Q 69. Will you indicate those spots? A. The main drain in this particular demonstration is located below the rear side quarter window at the bottom of the body.

Q 70. Could you tell me whether or not you would conclude from these two demonstrations that these particular cars which we have examined have or have no watertight seals between the fabric and the body line? A. In our top manufacture?

Q 71. Yes, these particular cars. A. In our manufacture they are not watertight seals, neither of the cars.

Q 72. Would you say these are true representations of all the tops that you make? Could you say that? Is it true or not? A. This is a true representation of all tops we make where they are fastened inside of the [22] car, when they are fastened inside of the car.

* * *

Q 73. [By Mr. Wolfe] Mr. Shapiro, I will ask you to have the wiper arm removed or loosened from each side and then I would like to have you lower and raise the top of each car. First, with respect to the Oldsmobile. For the purpose of the record, I would like to indicate that the wiper arm was not completely removed, because it is much easier merely to make it ineffective by loosening one end of it.

[23] [The top is lowered.]

Q 74. Now, will you raise it?

[The top is raised.]

Q 75. Mr. Shapiro, would you please examine the top now and indicate whether or not you notice any substantial differences between the position and condition of the top when it was in its raised position with the wiper arm removed or loosened, before being lowered and now after it has been lowered? A. There is no difference.

Q 76. Would you conduct the same experiment with the Ford automobile?

[The top of the Ford automobile is lowered.]

Q 77. Now, will you raise it, please?

[The top of the Ford automobile is raised.]

Q 78. Now, will you please make a comparison similar to that made in connection with the previously conducted tests? A. The difference is 1/8th of an inch difference in the spacing.

Q 79. I am sorry; I think you misunderstood my question.

Mr. Pollock: I would like to clarify what he says. You say that with the wiper arm off there is 1/8th of an inch difference in spacing between the fabric and the belt line?

The Witness: Let me just give you the measure. [24] 3/8ths in the center, 1/4th in the front, 5/16ths in the rear.

Q 80. You have just given us the spaces at various positions between the fabric and the body line with the wiper arm removed? A. Yes.

Q 81. After the top has been lowered and raised again with the wiper arm removed? Is that correct? A. That is correct.

Q 82. If my memory serves me correctly, the space is now smaller than it was with the wiper arm in position; is that correct?

Mr. Pollock: Well, I would agree that that is what the testimony would seem to indicate, that with the wiper arm removed there is a smaller space than with the wiper arm in place.

Mr. Wolf: This particular experiment would seem to indicate that.

Cross-Examination by Mr. Pollock.

[25] XQ 85. Would you take the same ruler and put it up against the top and push it in as far as you can and tell me what the measurement is? In as far as you can. A. [Measuring] 1-1/2 inch.

XQ 86. In other words, you can push it in 1-1/2 inch with the wiper arm removed and, as I recall, with the wiper arm in place, it was about 3/8th of an inch? A. It would be an inch and a half in the center, an inch and a half in the rear, an inch and a quarter in the front [measuring].

XQ 87. It was 3/8ths of an inch— A. In its normal position.

XQ 88. So actually when the wiper arm is in place it does help to push the fabric out or keep it in place, doesn't it? In other words, you could not possibly have pushed the fabric in the way you have just now if your wiper arm were in place? A. That particular section of the top is not meant to be pushed in.

• • •

[26] XQ 93. Obviously there has been a lot of discussion as to whether or not the top was distrubed or not when we were taking these measurements. It is pretty easy to disturb the fabric in the rear quarter and change the dimensions? A. Yes, but if comes back to its original position.

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Mr. Wolf: I would like the reporter to note that when the witness and Mr. Pollock were talking about disturbing and demonstrating the disturbing, they were physically forcing the fabric in with their hands.

• • • •

[27] XQ 95. I have just disturbed the fabric now. Would you measure the dimension near the center? A. 7/8ths of an inch. Three-quarters.

XQ 96. With the clamp in place it could not possibly be over 3/8ths of an inch at this point; isn't that right? A. That is correct.

XQ 97. So certainly with the clamp in place it does tend to push the fabric out and hold it in a certain spacing and even though there is some spacing, it is certainly no more than 3/8th of an inch; isn't that right? A. Yes.

• • • •

[28] XQ 100. I think our discussion has taken a minute or so; would you measure it again now at that center part? A. I would have to examine it down below to see if it was

pulled by the screws. By exerting a pressure there it could have been torn stretched from the securing screws below.

XQ 104. We don't know whether it was torn stretched before we started to measure before? A. It was not torn stretched. If it was torn stretched there would have been a wrinkle in the top.

• • •

XQ 105. All right. Would you get up and measure this thing now? A. Half an inch at the widest point. It is half an inch at the very widest spot.

XQ 106. How about the very narrowest spot? A. At the very narrowest spot it is 1/8th of an inch.

[29] XQ 107. 1/8th? A. 1/8th.

• • •

[32] XQ 123. Well, in a normal rain storm wouldn't some water bounce on the fabric? It certainly is not going to run gently down the top if you are out in a rain storm driving a car? A. That is right, but I say this test is highly superlative, because you would never simulate rain with the amount of water we are putting in one spot.

XQ 124. You would not simulate rain by squeezing a sponge? A. That is right. But we could put these cars outside and simulate rain and use a hose on them.

• • •

[33] XQ 126. That might be. The only point I wanted to make was that when you use a sponge you are not really simulating rain?. A. No, we are just showing direction of flow.

Mr. Pollock: Would the reporter note that the photographer had to go out for more film and since he has returned I will pick up on the Oldsmobile at the point we were working on several minutes ago. I believe Mr. Shapiro had put his hand down with the wiper arm removed. Apparently the man who was working with Mr. Shapiro has gone out to lunch and, therefore, if you consider it a fair

test, I think the wiper arm is still on on the other side, so could we take a picture on the other side with the wiper arm in place?

The Witness: We can put the wiper arm back on.

• • •

[34] XQ 130. Now, Mr. Shapiro, would you put your finger or hand as far as you can between the body line and the fabric when the wiper arm is in place and I will ask the photographer to take a picture? I think you put your hand down in the middle. Put it as far as you can.

• • • •

XQ 131. Mr. Shapiro, in both cars you have put your hand down as far as you can with the wiper arm removed and with the wiper arm in place; is that true? A. Yes, that is true.

XQ 132. And I think you will agree that with the wiper arm removed you could put almost your whole hand down but with the wiper arm in place you could perhaps one-third of one finger? Is that correct? A. That is [35] correct.

• • •

XQ 137. Isn't it true that the reason you could not put your hand further down in the car when the wiper arm was in place was because the wiper arm was in place? In other words, it was pushing the fabric over to a position where you could not put a lot of your hand in? Isn't that true? A. Not the pressure on the material, but the fact my finger was going into the car and then pushing the material against the wiper arm, but there is no pressure from the material on the wiper arm [36] if I did not put my finger on it.

• • • •

XQ 142. You say it brushes it? A. It might brush it.

XQ 143. You are talking about the wiper arm on a car having a No. 134 top? A. Yes.

XQ 144. Well, you say it might brush it; isn't brushing touching? A. Well, in our previous tests we raised and lowered the top without the wiper arm installed and it showed no ap reciable difference in the looks or fit.

[37] XQ 145. When the wiper arm is installed isn't it true by the very fact the top material in your 134 goes down between the belt line and wiper arm there is not much room in there and isn't it true as you raise the top the wiper arm is brushing against the fabric? A. The primary function of the wiper arm is to push against the fabric and make weathertight seal. It has nothing to do with the raising and lowering of the top.

XQ 146. I am not concerned with the nature of the seal once the top is raised. It is true, of course, is it not, that with no cushion we get an inferior seal with what it would be with the cushion? Isn't that true? A. I would say that you have a better function than with a weathertight seal. Most 1954 Fords that I have noticed had a bunching or a tearing effect on the outside fabric because the seal was too tight, and consequently there was friction between the wiper arm and body line.

XQ 147. The top will weather better, maybe last better if the wearing tension is not there? A. And looks better.

XQ 148. And maybe look better. But I think it is your contention that you do not get as good a seal, using the word seal for whatever purpose we can use it? A. Weathertight.

XQ 149. Whatever seal you get up here [indicating] is not a watertight [38] seal? A. That is correct.

XQ 150. It is something less than a watertight seal? A. That is correct.

XQ 151. Now you say when you are raising this top the wiper arm might brush against the fabric? A. I think the thing to do is put the top up and down and see.

XQ 151. All right. Can we do that? A. Yes. Do you want to go in and look at it and I will lift the top?

[The witness raises and lowers the top.]

XQ 153. Can you see the fabric in there? Isn't it true that the wiper arm is touching right against the fabric? A. Oh, the wiper arm is touching right against the fabric, because we have such a small space between the wiper arm and the body, but we have done this without the wiper arm and it showed no difference.

• • •

XQ 155. From your observations I believe you pointed out during this raising and lowering that there was a fairly small space between the outer surface of the wiper arm [39] and the inside surface of the car and the fabric fitted between that small space? A. That is true.

XQ 156. Isn't it also true that as the top was raised, we actually saw the wiper arm wiping against the fabric? A. In this instance, yes.

XQ 157. Now could we do the same thing with the Ford top or would you agree that the same thing would happen? A. I would agree the same thing would happen.

• • •

XQ 159. Isn't it true that the wiper arm and fabric are touching each other directly as this top was raised? A. Yes.

Mr. Wolf: For the purpose of continuity I would like to ask a question at this point, and that is; Is there any specific function that the wiper arm performs during this particular raising and lowering procedure which Mr. Pollock was just questioning on?

[40] The Witness: As far as our manufacture of this model top, it serves no function whatsoever.

XQ 160. Now, just to clarify the previous testimony. On this Oldsmobile with the top No.— A. 231.

XQ 161. —231 on it, we observed that as the top was raised and lowered the wiping arm, whatever its function

in this particular case, and we are not concerned with its function, but it is quite clear from your observation that the wiper arm and fabric were actually touching one another as the top was being raised? A. That is true.

XQ 162. You say the same situation has occurred in the Ford automobile with your top No. 134 on it? A. Yes.

Mr. Wolf: I would like to have some photographs taken of the inside to show the construction. May we do it now?

Mr. Pollock: Surely.

Mr. Wolf: I would like to have the photographer take as Exhibit No. 11, I believe, a photograph of the interior of the Oldsmobile car with the top down, and I would ask Mr. Shapiro to indicate with one hand, if possible, the folding bows and with the other the wiper arm, the photograph being taken from the front side of the car looking towards the rear quarter.

Will you please indicate for the purpose of [41] clarity? And we will take two photographs, first, Exhibit 11, with Mr. Shapiro indicating the wiper arm structure.

[Photograph EXHIBIT 11 is taken by the photographer.]

I would also like to state for the purpose of the record that the rear window has been removed for the purpose of taking this photograph, and the photograph is being taken from the trunk area of the car through the window.

Mr. Wolf: Now will you please place your finger between the fabric and the wiper arm?

Mr. Pollock: When you are doing this, Mr. Shapiro, isn't it true that you are pushing the fabric away from the wiper arm? And, perhaps for clarity, before you put your finger in there, isn't it true that in this Photograph 11 that was just taken the wiper arm and fabric are touching one another in there?

The Witness: I would say so.

Mr. Wolf: Now, will you please place your finger be-

tween the wiper arm and the fabric? Is that about as far as you can get it?

[The witness indicates.]

[Photograph EXHIBIT 12 is taken by the photographer.]

Mr. Pollock: And in Photograph 12 you have inserted [42] your finger in and pushed the fabric away from the wiper arm; isn't that right?

The Witness: Yes.

Mr. Wolf: Now I would like as Exhibit 13 to take a picture from the same position with Mr. Shapiro indicating the folding bow and associated mechanism. Can you indicate the folding bows? Will you indicate the folding bows closed and the wiping arm?

The Witness: It would be this structure right here [indicating].

Mr. Pollock: In order to save a picture, you are indicating the folding bows with your left hand and could you also put your right hand on the trough, which, I believe, is exposed at least in part, so your right hand indicates the trough and the left hand indicates the folding bows?

I would like the photographer, if he can, to get pictures in of the fasteners to the left of Mr. Shapiro's right hand which show where the material is fastened to the trough.

[Photograph EXHIBIT 13 is taken by the photographer.]

Mr. Wolf: I would like to take some pictures with respect to the Ford automobile, please.

The Witness: This top was placed on it June, 1956.

[43] Mr. Wolf: Mr. Shapiro said this top was placed on it June, 1956. Will you please indicate that was a correction from a previously indicated date of installation, I believe.

In connection with this particular car, Mr. Shapiro, will you please examine the interior and indicate whether you

see any traces of water in the inside as a result of the quantities that have been placed on it with a sponge test?

The Witness: There is no leakage whatever.

Mr. Wolf: I will ask the photographer to take a picture from the trunk area of this car with Mr. Shapiro indicating the wiper arm with his right hand and with his left hand I would like him to indicate the trough or place where the trough is located.

The Witness: The trough is on the back side of the material.

Mr. Wolf: Will you indicate the location of the trough and the point at which the fabric is attached to the trough?

The Witness: These screws are right into the trough.

[44] Mr. Wolf: Indicate with your left hand the trough and with your right hand point to the wiper arm.

[Photograph EXHIBIT 14 is taken by the photographer.]

Mr. Wolf: Now will you please indicate the folding bow mechanism and I will ask the photographer to take this as Exhibit 15? Perhaps you could save a photograph here. Can you insert your finger, your left hand—no, I don't think it shows. Just indicate the folding bow mechanism.

[Photograph EXHIBIT 15 is taken by the photographer.]

Mr. Wolf: Now can you take your right hand and place it between the fabric and the wiper arm?

[Photograph EXHIBIT 16 is taken by the photographer.]

XQ 163. And again you are pushing the fabric away from the wiper arm, isn't that correct? When you are inserting your finger in, isn't it true you are pushing the fabric away from the wiper arm? A. Yes.

XQ 164. And does the fabric actually touch the wiper

arm before you put your finger in? A. In the front i does not; in the rear it does.

XQ 165. You mean the front of the wiper arm and th rear of the wiper arm? A. That is right.

XQ 166. All right. Incidentally, while you are inside th car, Mr. Shapiro; is there a body panel inside this car? [45] A. What do you mean by body panel?

XQ 167. Is the trough supported on a body panel? A. Th trough is welded to the body.

• • •

XQ 174. Then there is a panel inside the car for sup porting the trough, isn't there? A. I don't know what it was put there for.

XQ 175. There is a panel that does support the trough whatever [46] its other functions might be? A. It is true part of it becomes the panel and also the place to secure the side quarter to.

• • • •

XQ 176. Now, for the record, a moment ago we were in the trim shop of Aro Top Sales? A. The trim room.

XQ 177. The trim room; and this is now your office that we are in? A. This is my office.

XQ 178. Is this part of Aro Top Sales? A. It is Aro Manufacturing.

XQ 179. And where does one leave off and the other be gin? A. Anything to do with the making is Aro Manufacturing and anything to do with the selling is Aro Top Sales.

• • •

[47] XQ 181A. Starting at the very beginning of the list and I think the first item is 122, over at the extreme upper left-hand corner, would you look down through all the model numbers there and list any of your numbers that were made for cars having wiper arms on them? A. 134, 30 224, 226, 239, 231, some 232's.

Mr. Wolf: Will you indicate what you mean by "some 232's"?

The Witness: In the 232 covers, 1953 and 1954 Chevrolet and Pontiac, all the 1953 had wiper arms and only some 1954's had wiper arms and some had a stationary [48] plate that did not fold with the top and was secured to the body with screws. That was the late 1954.

XQ 182. So you have listed some 232's? A. Yes.

XQ 183. Would you continue? A. 234. That is all, to my knowledge.

* * *

[49] Mr. Pollock: For the purposes of the record, three boxes have been brought into the room, which apparently contain convertible top fabrics, identified by various numbers appearing at the ends of the boxes and also identified by various model numbers for cars on which they are to be used. I have not examined the contents of these boxes, but I assume that they do contain the tops and various components for installing the top on the cars which are designated on the ends of the boxes, and I would be willing to stipulate that these represent typical boxed fabrics and other components such as are manufactured by Aro Manufacturing Company for use on convertible automobiles.

Mr. Wolf: Would you be willing to further stipulate that these particular boxes are representative of the kits which are manufactured and sold for replacement top installation by Aro Manufacturing and Aro Top Sales for the enumerated models which Mr. Shapiro has just listed?

Mr. Pollock: Yes, I will be willing to stipulate to that with the understanding that I do not stipulate to any special meaning of the word "kit." I do not [50] know what a kit is and if it is meant to have some special meaning, I cannot agree to any special meaning.

[Discussion off the record.]

Mr. Pollock: It is further stipulated that these boxes contain complete convertible tops ready for installation with all of the necessary fittings required for such installation.

The Witness: That is right.

Redirect Examination by Mr. Wolf

Q 190. Will you please indicate, Mr. Shapiro, whether or not these three boxes are the type of product which you referred to in your previous stipulation as a kit? I believe when you testified some months ago you indicated that certain kits were being sold by Aro; are these the kits to which you referred? A. These are the kits, yes.

[52] Q 195. Would you please open up the part No. 1, the box containing parts 134, and identify each component part?

Mr. Wolf: And I would ask the reporter to mark this as Defendants' Exhibit No. 17.

[Box containing Part No. 134 is marked EXHIBIT 17.]

Q 196. Will you indicate when that was made? A. This top was made November 12, 1956. November 13. Excuse me. November 13, 1956.

Q 197. As you take each element out will you please identify it, and I would like to have it identified by Exhibit Nos. 17-A, B, and so forth. A. The first item that is taken out of the box is the item Hidem Welt.

Mr. Wolf: I will ask that be marked Exhibit 17-A.

[Hiden Welt is marked EXHIBIT 17-A.]

[53] Q 198. Will you continue? A. The next item that came out of the box is Kraft Bag containing one-quarter pound box of tacks, six finished nails, and six finished tips.

Mr. Wolf: I ask to have that marked Exhibit 17-B.

[Paper bag containing 1/4 lb. box of tacks, 6 finished nails and 6 finished tips is marked EXHIBIT 17-B.]

Q 199. Will you continue? A. The next item that came out of the box is a fabric with the Part No. 134332 and beside that a large figure 2. Do you want me to explain this?

• • •

A. [Continuing] It shows Part 134, it is the third cut, 332, and it shows the Regal quality. There is a black fabric curtain complete with zipper in the box.

Q 200. Excuse me. Before you continue, I would like to have the reporter mark this. Will you identify this element here? You read the number off, now will you identify it further for the record? Will you indicate what it is? A. It is a convertible top for a Part 134.

[Convertible top for Part 134 is marked EXHIBIT 17-C.]

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[54] Q 202. Could you clarify that and indicate where the front trim lace is? A. It closes the spacing between the front bow and the top of the windshield.

Mr. Wolf: I will offer that as Exhibit 17-D.

Mr. Pollock: You mean you are identifying it.

[Front strip is marked EXHIBIT 17-D.]

Q 203. Will you please examine the remaining part? A. Well, the curtain is all there is and we identified that.

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Q 205. The other two remaining kits which are now here, and which I offer as Exhibit 18 and 19, are identical in the number of components except for the front strip, is that correct? A. That is correct.

• • •

[Kit No. 132 is marked EXHIBIT 18.]

[Kit No. 231 is marked EXHIBIT 19.]

Q 207. Now, I have here Kit No. 132. With respect to

that kit [55] will you please identify it for what model? A. This No. 132 fits the 1951 Ford Convertible.

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Mr. Wolf: I would like to have the reporter mark this top as Exhibit No. 18-A.

[Top from Kit No. 132 is marked EXHIBIT 18-A.]

Q 210. Would you open up Exhibit 18-A and hold it up? Now, could you unfold this Exhibit 17-C beside it and I would like to hold them up side by side. Now, could you please point out to me the differences between the structures of these two models, that is, 17-C and 18-A? A. The only differences between these two models are that the lower rear quarter section where one is fastened on the outside of the car and one is fastened on the inside of the car.

Mr. Pollock: Would you identify which is which?

The Witness: 134 is fastened inside the car and 132 is fastened outside the car.

• • •

[56] The Witness: The rear quarter of 134 is longer.

Mr. Pollock: So it can come down inside the car and be fastened?

The Witness: That is right.

Q 211. About how much longer would you say it is? A. I would say approximately six or seven inches.

Q 212. Do all the other parts or components which go to make up these particular two exhibits correspond in other respects? A. In other respects they are practically identical, except for a little difference in shape or size, but the construction is the same.

Q 213. All right. Now will you please mark on the Model 132, Exhibit 18-A, that portion of the rear quarter which is attached to the body of the car at the quarter? Just make an X.

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[57] Mr. Pollock: Why don't you mark that Y or X prime? And while we are at it, could you draw a line across there to show where one fabric—

The Witness: The body line?

Mr. Pollock: Yes.

The Witness: The body line would be right here [indicating]. It is about here and here [indicating]. In other words, this is the distance.

Mr. Wolf: Would the court reporter indicate that the witness has drawn a line across the fabric?

Q 215. As I understand it, the portion below the line extends into the car? Is that correct? A. That is correct.

* * *

[58] *Re-cross Examination by Mr. Pollock.*

* * *

XQ 217. Now, Mr. Shapiro, I have here another top, and I request that you examine it. Could you please identify what this particular top is? A. That top is an Aro Part No. 224 or 227. It is in the original container.

Mr. Wolf: Well, excuse me. It appears to be the original container.

A. [Continuing] It appears to be in the original container and the date of manufacture is on the sealing tape, 23, which signifies February of 1953.

XQ 218. Does this represent a top which your company, Aro Manufacturing Company, actually made? A. Yes.

[59] XQ 219. Now this particular top has a cushion in it? A. Yes, that is correct.

XQ 220. And, as I understand, you state that this cushion was discontinued some time early in 1954? A. Yes. Well, some time early in 1954, it was discontinued the same date or within a week of the notification.

Mr. Pollock: I request that the reporter mark this particular top for identification as Cross-Exhibit 5.

[Aro Manufacturing Company top No. 227 is marked CROSS-EXHIBIT 5.]

• • •

XQ 223. Now, this particular top has a cushion in it. Can you state whether or not the top with the cushion in it is identical with the original which was manufactured by General Motors for installation on an Oldsmobile car at around this time? A. Identical in—

[60] XQ 224. Well, how about the shape? A. Externally it looks similar to a General Motors.

XQ 225. Did they have a cushion in the same spot as your 227, Cross-Exhibit 5? A. Yes.

XQ 226. Did they have an elongated flap across the cushion for fastening to the trough inside the car? A. Yes.

XQ 227. And your top also has this type of flap? A. Yes.

• • •

[61] XQ 232. Your original replacement? A. Our original was not as heavy a cushion. Where that is two inches wider on the General Motors, ours is four inches wide on the Ford.

• • •

XQ 234. I would like to clarify this sequence. As I recall, you testified that your original replacement top, Part No. 134, had a cushion in it. Is that correct? A. That is correct.

XQ 235. When that top was installed on a car in the 1952, 1953 or 1954 Ford model, it gave you a very good seal, water seal, near the belt line? Is that correct? A. That is correct.

XQ 236. And then the cushion was dropped and a flap or shingle was substituted for it in your top No. 134? A. That is correct.

XQ 237. And that gave you a somewhat poorer water seal? Is that [62] right? A. No.

XQ 238. You say that with the cushion you got as good

a water seal? With the shingle you got as good a water seal as with the cushion? I am not concerned with the tearing problem. A. No. For our own satisfaction as far as keeping the inside of the car dry, it was as good.

XQ 239. How about shedding that water on the outside of the car? A. It did a pretty good job of shedding.

XQ 240. Would you say it was as good a job of shedding as with the cushion on it? A. I would say better.

XQ 241. You say the shingle did a better job of shedding water off the outside of the car? A. Yes.

XQ 242. Than the cushion did? A. Yes.

XQ 243. And then you dropped the flap and the cushion and you put nothing in there? A. That is correct.

XQ 244. Just relied on the fabric itself? A. That is right.

XQ 245. And that did not do as good a job at all of sealing, is that right? A. That is right.

XQ 246. But still whatever water got in ran into the trough so you were not really concerned because the inside of the car did not get wet, anyway? A. That is right.

XQ 247. So with the cushion and shingle eliminated it was an inferior seal from the point of view of shedding water? A. Yes.

• • •

[63] XQ 252. So that the fabric is touching the wiper arm during the raising and after the raising of the top. Now, [64] as I understand the situation, you are saying that even though the wiper arm does touch the fabric when the top is raised, the removal of the wiper arms would not affect materially the sealing function at the rear quarter? Is that right? Or the lack of sealing?

Mr. Wolf: Excuse me. Are you asking this with reference to whether or not it is as a function or purpose or its effect with reference to what Aro manufactures or with

reference to the original installation as apparently intended?

Mr. Pollock: Well, we are talking about a top with a wiping arm on it, and with your present top 134 on it.

Mr. Wolf: That is with Aro installation.

Mr. Pollock: Yes.

A. I would say that the wiping arm was immaterial as far as Aro is concerned.

• • •

[65] XQ 255. There was some amount, I think 1/8th of an inch? A. Yes, I would say there was 1/8th of an inch difference.

XQ 256. Which shows that the wiping arm is pushing perhaps only 1/8th of an inch? A. That is correct.

XQ 257. If you removed the wiping arm the fabric might go away from the inside of the belt line 1/8th of an inch more than if the wiping arm were there. Isn't that right? A. It might go 1/8th of an inch, yes.

• • •

[66] XQ 262. Would you say the wiper arms are as important as the fabric itself? A. I would say—

Mr. Wolf: Excuse me. I have to object to this. Are you specifically referring to the wiper arm with original top installation or with Aro top installation?

Mr. Pollock: I am speaking throughout about a car replacement top No. 134 as manufactured by Aro Manufacturing Company.

A. I would say that the wiper arm as far as the mechanism of the top going up and down and outward appearances and waterproofing in relation to an Aro top is immaterial.

[67] XQ 263. But would you say that the top fabric itself is a material part of the folding top assembly? A. I would say that the actual fabric itself, without it it is not a convertible top.

XQ 264. That is right. Now, in this particular fabric, Part No. 134, you have a part that comes down and fastens inside the car by being fastened to the trough, is that right? A. That is correct.

XQ 265. Would you say that that particular section of the fabric which extends inside of the car and fastens to the trough is fairly important in keeping water out of the car? A. Yes.

XQ 266. Would you say— A. In keeping it out of the car, but I was going to say—

XQ 267. Keeping it out of the interior of the car? A. Keeping it out of the interior of the car. The fastening to the trough is very important, yes.

XQ 268. Am I correct in stating that one of the important improvements in folding tops of the type used on the 1952, 1953 and 1954 Fords, by way of example, is the fact the fabric comes down into the car and is fastened on the inside of the car so no water can get on the interior of the car itself and any water which does seep down past the fabric goes into the trough? A. That is [68] correct.

XQ 269. Does the idea of having a section of the fabric coming down inside the car and actually fastening on part of the car, for instance, adjacent to the trough, is that the important thing? A. That is correct.

XQ 270. You have listed a number of Aro part numbers this morning which are used on cars having wiper arms on them? A. That is correct.

XQ 271. Am I correct in assuming that every one of those part numbers you mentioned includes a top section element coming down inside the car and fastening inside the car near the trough? A. Yes, they all fasten against the trough.

• • •

[70] XQ 290. What was the first automatic top you had

or which you manufactured which had a flap which was permanently attached to the inside of the car? A. 134.

XQ 291. That was for the 1952 Fords. Didn't you make— A. I mean 224.

XQ 292. For the 1950 General Motors car? A. I mean 224.

XQ 293. That was the first top fabric which you manufactured which had the flap which extended inside the car and was permanently fastened there to give you an automatic top? A. That is right.

XQ 294. Do you know of any other tops automatic in nature which had a flap extending inside the car and fastened to the interior permanently to give you automatic operation? [71] A. No.

XQ 295. Prior to 1950? A. No.

XQ 296. You don't know of any others? A. No.

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[80] XQ 336. When you started manufacturing new tops, you designed the pattern, I suppose, for the new tops? A. Yes.

XQ 337. And those new tops had a flap on them or shingle on them? A. That is correct.

XQ 338. How long a period of time was it, if you recall, between the time that you dropped the shingle completely? A. How long did we manufacture tops with the shingle?

XQ 339. That is right. For Part No. 134? A. I would take a rough guess about a year.

XQ 340. About a year. In other words, some time in early 1955 or so you decided to drop the shingle put on Part No. 134? A. That is correct.

XQ 341. As I understand it, you are still manufacturing some tops with a shingle on them? I believe we had one this morning as an exhibit? A. No. 231.

XQ 342. What car is that for? A. 1951, 1952, 1953 Oldsmobile.

XQ 343. Those tops as you presently manufacture them still have a shingle on them? A. Yes.

• • •

[81] XQ 345. I would like to clarify some points. This morning we saw a 1953 Ford with a top No. 134 on it as manufactured by Aro Manufacturing Company. Is that right? A. That is correct.

XQ 346. I am not asking you to identify what parts were made by the Ford Company or what parts were made by your company, but I will ask you to recall the overall structure, as it was sitting in the trim shop of Aro Top Sales Company and ask you whether or not that overall structure included a convertible automobile body? A. Yes, it did.

XQ 347. And that convertible automobile body, as I recall it, had a lower metal body structure? A. That is correct.

XQ 348. Did it also have a folding bow structure supported by the tonneau? A. Yes.

XQ 349. What is the tonneau? A. The tonneau is the belt line. It is the horizontal line across the belt line. In other words, it is just a flat, if you took the whole folding structure off the car you would have just a tonneau.

XQ 350. Is that just a surface or the whole body below— A. Just the surface.

[82] XQ 351. Just the surface, I see. Does this folding bow structure that was on the 1953 Ford that we saw this morning have flexible top material supported on it? A. Yes.

XQ 352. And did that top material include a rear quarter section? A. Yes, it did.

XQ 353. Didn't that rear quarter section include a part that extended down below the top of the tonneau? A. Yes.

XQ 354. And a portion of the rear quarter section was spread out, wasn't it, adjacent to the inside of the tonneau? A. Yes.

XQ 355. As I understand it also the lower edge of that extending flap was fastened to the inside of the car, wasn't it? A. To the trough, yes.

XQ 356. It was actually fastened to the trough line that is in there? A. Yes.

XQ 357. Do you recall also that this top had a wiping arm on it? A. Yes, it did.

XQ 358. The top assembly had a wiping arm on it? A. The body assembly.

XQ 359. There was a wiping arm attached to the folding bow, wasn't there? A. The folding bow on the front and the body on the rear.

XQ 360. So that the wiping arm was attached to the bow at the [83] front? A. The folding mechanism at the front.

XQ 361. And it is pivoted to the body at the rear? A. That is right.

XQ 362. It moves when the folding bow moves? A. It has a pivot.

XQ 363. Do you also recall we examined how that wiping arm moved during the raising and lowering of the top and do you recall it was touching the fabric as the top was raised? A. Yes.

XQ 364. I understand that it is your contention that when the top was in a completely raised position there is not a water-tight seal between the fabric and the inside of the belt line? Is that correct? A. That is correct.

XQ 365. Do you also recall that the arm pushes against the fabric perhaps moving it 1/8th of an inch or so? I know you don't think that is substantial, but did it move it 1/8th of an inch or so? A. In one part of it, yes.

* * *

[89] The Witness: On the record, this drawing is in the rough, but basically it is fairly correct. The shingle is above the body line.

XQ 396. Again, you said it depends on how it is in-

stalled. Will you agree that in your car, which is an Oldsmobile—and what year is that? A. 1953.

XQ 397. —all along one side the shingle does rest right on the body line? Do you recall that? A. Yes, on one side it does and on the other side it doesn't.

XQ 398. On the other side one-half or one-third rests on and the other part of it is increasingly away from the body line? A. That is correct.

XQ 399. There it apparently depends how the top of the shingle is installed on the car as to where the shingle rests [90] or its position with respect to the body line? A. That is right, but in no circumstances is it between the body and the wiper arm.

* * *

Redirect Examination by Mr. Wolf

Q 402. With respect to original top installations as embodied, for example, in the 1952 Ford, could you please indicate whether or not the wiper arm in that original installation performed an essential function? A. In an original installation by the Ford Motor Company the purpose of the wiper arm was to exert the pressure against the so-called cushion to keep water [91] out of the car.

Q 403. When you say to keep water out of the car, what do you mean? A. By pressing against the cushion and making a watertight seal between the top material and the belt line.

Q 404. Did the wiper arm in fact perform that function? You say it was intended and I am asking you now whether it did actually perform it? A. To my knowledge it did.

Mr. Pollock: A watertight seal?

The Witness: Yes.

Mr. Pollock: I am trying to compare this with your previous testimony where you said the flap did an even better job.

The Witness: When I said that our flap did a better

job, it was a better job so far as serviceability but not in watertightness.

Q 405. You have just stated that the Ford Motor Company car original construction of 1952 actually produced a watertight seal; now can you say the same thing with respect to the other models of automobiles for which you make replacements and which have wiper arms? A. Is this original car equipment?

Q 406. Yes, original car equipment. A. They did produce a watertight seal from 1950 to 1953 inclusive and the [92] first half of 1954 on the Chevrolet and Pontiac.

Q 407. Does that answer the question with respect to all the original tops used in connection with wiper arms? Did all those cars have watertight seals or were they so intended to have watertight seals? A. Yes, 1950 to 1953.

Q 408. How about the later model General Motors cars? 1954, 1955, 1956, which had wiper arms? A. The only one which used a wiper arm in 1954 was Chevrolet and Pontiac.

Q 409. How about the 1954 and 1955 Lincolns? A. The 1954 and 1955 Lincoln had the exact same arrangement as 134's.

Q 410. So your answer would or would not apply to those models? A. Yes, it would.

Q 411. In the absence of a cushion or other means for filling that space between the wiper arm and body line, does the wiper arm have any function of specific significance? A. No.

Q 412. Would you, therefore, summarize by pointing out the distinctions between functions performed by the wiper arm as incorporated in an original structure and as incorporated in a car having your replacement tops for one of those models in question? A. The functions of the wiper arm in relation to original car equipment was to keep the water out by [93] means of a pressure seal between the wiper arm and the belt line of the car. The function of the

Aro No. 134 was to let the water in and utilizing the existing drains and letting the water go its natural course. And I might interject that we have had no leakage in the interior of the car since the incorporation of this idea.

[94] Q 419. That is not the point that Mr. Pollock has brought up. He said that you have answered depositions and interrogatories previously in which you have said the fabrics that you had here were in fact corrected by removing the cushions and just recently you said that is not so, and I wanted to find out whether you could indicate at this time for the purpose of the record which is correct and how the apparent discrepancy in your testimony has come about? A. Well, starting at the beginning again on this question, I would say to my knowledge, and if you wanted to I could get my foreman in here right now under oath, and we did remove cushions from every top, to our knowledge, that had cushions on them.

[95] Mr. Wolf: Mr. Pollock, would you want to have the foreman come in?

Mr. Pollock: On this point it would just raise another discrepancy, because we have asked for people who actually did the removing, and the answers were he didn't know. Now, apparently, if the foreman comes in at this point, he suddenly does know who did some removing.

The Witness: I would not know who actually in the factory did it.

Mr. Pollock: Well, did he do it?

The Witness: He must have been in on it because anything I do in here I pull him in with me.

Mr. Wolf: The question before was: Do you know the people who did it? And I think this answer he gave was not incompatible with the question. You wanted to know the names of certain people, apparently, for the purpose of obtaining their deposition or testimony, and he indi-

cated he did not know those names. He still says he doesn't know the names, but he says his foreman would have knowledge that these things were done.

* * *

[109] *Re-Cross Examination by Mr. Pollock:*

XQ 445. Just one more question. The place we were in this morning was the trim shop for Aro Top Sales? A. We do not call it a trim shop; we call it our trim room.

XQ 446. You actually install tops in there? A. That is our laboratory.

XQ 447. You actually install tops in there? A. Yes, we do.

XQ 448. Including these tops 134? A. Yes.

* * *

DEPOSITION OF GEORGE SHAPIRO

November 5, 1957

* * *

[2] *Direct Examination by Mr. Power*

Q. Your name is George Shapiro? A. That is right.

Q. And you live at 1778 Commonwealth Avenue, Newton? A. Yes, I do.

Q. And you are an officer of Aro Manufacturing Co., Inc.? A. I am.

Q. Namely, clerk, as I recall. That is right? A. That is right.

[3] Q. And you are a partner in Aro Sales? A. Aro Top Sales Company, yes.

Q. Aro Top Sales. And Aro Manufacturing Co., Inc. manufactures convertible automobile tops; is that right? A. That is right.

Q. And it sells exclusively to the partnership; is that right? A. That is right.

Q. And then in turn the partnership sells what it buys

from the Aro Manufacturing Company to the trade, is that right? A. That is right.

Q. And you are sales manager of the partnership? A. I am.

Q. And as sales manager, I suppose, it is fair to say that you supervise the entire selling operation of the partnership? A. I do.

Q. Now, can you tell us the categories of buyers to whom the partnership sells convertible automobile tops? A. By category you mean the different types in the automotive trade?

Q. Yes, sir A. Well, what they call the auto trim jobber.

Q. What is an auto trim jobber? [4] A. He sells roll goods or top materials, seat covering material, upholstery cloths, various other things that go into automobile upholstery.

Q. And what other kinds of buyers are there? A. Then there is what we call the specialty volume buyer who would be someone who has a chain of retail stores and acts as a wholesaler for those stores. Then there is the automotive accessory chain stores and then there is the trim shop itself.

Q. And does that about cover it? A. And there is the automobile dealer and the car manufacturer.

Q. You sell to car manufacturers? A. On replacement.

Q. I take it you do not sell as such to the retail trade? A. Well, we do in our own back yard. I mean, if someone comes in and wants to buy a top, we do, or if they want it installed we do.

Q. But that is only in Newton? A. Usually just around our own back yard.

Q. Yes. Now, these customers of yours, the auto trim jobbers, first of all, they in turn, I take it, sell to retailers? A. That is right.

[5] Q. And will you describe the kind of business these

retailers do to whom the auto trim jobbers sell? A. Well, they sell to the trim shop who in turn installs it. They might sell to a small accessory store and to the car dealer.

Q. And the specialty volume buyer, how does he differ from a jobber? A. Well, he is a volume buyer or a seat cover specialist. He is usually an account that does a tremendous volume and he will buy equal amounts to a jobber and, in many cases, he has more than one or two retail outlets that do the installing.

Q. And, of course, the automotive accessory chain stores buy for themselves? A. That is right.

Q. And then you sell to trim shops which are retailers? A. Yes.

Q. And the automobile dealer buys for his own installation? A. That is right.

Q. And so to the car manufacturer; is that right? A. That is right.

Mr. Wolf: Will you clarify that?

The Witness: No, the car manufacturer actually for replacement, they do it for their own replacement [6] purposes. They install it themselves.

Q. That is what I understood, yes. Now, we are down to the level of the retail outlets, and the various retail outlets sell your product or Aro Manufacturing Company's product to automobile owners; is that right? A. Automobile owners and used car and new car dealers.

Q. And the automobile owners or dealers, used car dealers either with their own hands or with the assistance of a mechanic replace the tops on their automobiles with your product? A. Yes.

* * *

Q. I suppose it is true that the owner of a convertible buys the product of your company for a variety of reasons? Is that right? A. That is right.

Q. First of all, if there is a hole in his present top, he wants a top put on that does not have a hole? A. That is right.

Q. Or if the top is dirty, he might want a clean top? A. Well, that is more or less the exception rather than the rule. We hoped it was that way but it is not.

Q. For instance, there are white tops on the market? A. Yes.

[7] Q. Both on the original car from the factory and as replacement? That is right? A. That is right.

Q. And white tops do get dirty? A. They do.

Q. And some people replace them? A. They do.

Q. And is it fair to say that tops are replaced with the product of your company because the automobile owner gets sick of the color of his original top and wants a change of color? A. I would not think so, no.

Q. You put out a wide variety of colors? A. We do.

Q. Isn't the purpose of that to induce the automobile owner to make a change? A. No, the purpose of the wide variety of colors is because car equipment has a wide variety of colors.

Q. Well, I am told that at one time in, I think, 1954 and 1953 you put out a top known as Aro Kilty Top? A. That is right.

Q. It came in red, green and blue-gray plaids? A. That is right.

Q. Now that top wasn't to replace the same color top out [8] of Detroit, was it? A. No, it wasn't.

Q. So in fact at least that line was sold to people who wanted to have a novel change in color; isn't that right? A. No. It is not primarily color that makes them change. It is when the top is worn and then they go looking around for a top that they have their choice of various colors.

Q. And convertible tops also become faded? A. That is correct.

Q. So an automobile owner would perhaps buy one of your products because he had a faded top and wanted to replace it? A. That is correct.

Q. Now, turning to dealers, a secondhand car dealer fixes up the appearance of a car in order to sell it? You will agree with that, I trust? A. I do.

Q. And when he has in his hands a convertible automobile a dealer might well buy a new cover in order to dress it up? That is true? A. That is true.

Q. Throw away a dirty cover, or faded cover, or a torn cover; [9] is that true? A. That is right.

Q. Now, I guess I am looking merely for education at this point, but isn't it true that from year to year colors whether of automobiles or of convertible tops vary in popularity? A. Well, let me just—

[Colloquy off the record.]

A. [Continuing] It is not the increase in colors; it is the popularity of the convertible, there being more on the road and, therefore, they have added more colored tops and bodies.

Q. Well, put it this way: I got a ride this morning from a neighbor to the railroad station in a pink Chevrolet; it was not a convertible but it was a pink Chevrolet. Now, you will agree with me that never would have happened to me ten years ago? A. No, I agree with that.

Q. And it is true of convertible tops, too, isn't it? A. I don't think so.

Q. Well, you have said there is an increase in colors? A. There is an increase in colors, yes.

Q. And wouldn't you suppose that an automobile owner who had a black convertible top that was 1950 or 1951 [10] vintage, he took very good care of this car, and he sees his neighbors with more dashing colors, and he would want to get into the swing of things and have a colored top? A. Well, that might be true but some of these colored tops

in the absence of color such as white have been sold for many, many years.

Q. But increasingly so in recent years? Is that right? A. That is right.

Q. Now, as I understand it, when a national manufacturer of automobiles comes out with a new line and a new design in the convertible top field, very shortly thereafter you come out on the market with tops that are suitable for being put on the new line of convertible top cars; is that correct? A. That is correct.

Q. And about how long is the time lag between Mr. Ford coming out with a new line and your meeting it, so to speak? A. Well, we only meet it as the occasion demands, as far as time is concerned.

Q. When does that demand come? A. That we don't know. Sometimes a car can be damaged in transit, and sometimes a customer can get a brand new [11] car and have it slashed the next day.

Q. Well, you are ready to replace within a matter of a few months, aren't you? A. Yes, we are.

Q. Your Sales Company's 1955 literature contains in effect offers for sale of complete set of replacement fabrics for all 1955 convertible automobiles, doesn't it? A. I believe it does.

* * *

Cross-Examination by Mr. Wolf

XQ. Just a couple of questions, Mr. Shapiro. When Aro Top Sales deals or sells a kit for any top to any purchaser do they or do they not have knowledge as to the reason for the purchase? A. No.

XQ. Do you concern yourselves in Aro Top Sales with the reasons for particular purchases? A. No.

XQ. You mentioned previously that automobile dealers in used automobiles purchase fabric tops occasionally to fix up a car for resale; in connection with this particular

type of purchase, can you tell me whether or not you know generally the conditions of the tops? A. We don't know the purposes why they buy the tops.

[12] XQ. Let me finish. The condition of the original tops? A. No. Let me just qualify that. Not unless we install it. Then, again, most of us don't even check, anyway.

XQ. Now, can you tell me whether or not a faded top which is replaced—can you tell what its condition of wear is other than being faded? A. Well, a top can be in perfectly good condition if the dye is gone out of it. Let us say a top with a cheap dye and a good rubber combine can be just as waterproof.

XQ. When you see a faded top being replaced can you tell me whether or not there is usually wear in addition to the fading? A. That again depends on the dye in it. Most likely on a better grade top there might be or there should be wear along with fading.

XQ. In connection with the general state of the trade, are you familiar with the number of manufacturers of convertible replacement tops? A. Yes, I am.

XQ. Can you tell us something about it, about the number in general? I would like to know something with respect to the numbers of manufacturers, the type of [13] operation and the number of purchases made by manufacturers. Whatever will throw light on that general question. A. Well, there is national, and by national manufacturers I mean those who sell out of their own particular geographical area, there is about seven or eight of them. There is countless smaller manufacturers who sell in their own trading area. In other words, they have a geographical location and sell a pick-up service around that area.

XQ. Do you have any knowledge of the smaller manufacturers? Do you have personal knowledge of these smaller manufacturers? A. Yes, I have.

XQ. Can you tell me about how many you have heard

of? A. Including those that have been in business, and have gone out?

XQ. Well, you could specify, yes. A. Well, I think there is, I would say, about twelve or fifteen—

XQ. That you know of? A. Yes. —that are active today and probably the like amount that have been in business and have gone out.

XQ. You mentioned seven or eight national manufacturers? [14] A. That is right.

XQ. Do you have any idea as to how many trim shops there are in the country? Or other dealers who ultimately install these tops? A. I would say about 15,000.

XQ. In connection with the automotive car manufacturers do you have any knowledge as to their customs and procedures in replacing original tops, first, with respect to their own manufacture? A. Well, that is a long process. I assume you mean that if the car dealer decides he wants to replace a top from the car manufacturer? Is that right?

XQ. Yes. A. Well, he has to order that through the local parts depot who in turn orders it from the central parts depot in Detroit, who has to issue an order. Then there is a time limit of approximately a minimum, I would say, of three months before it finally comes back to the car dealer.

XQ. To your knowledge do the automotive car manufacturers do a substantial portion of the business in replacement tops? A. I would say No. You mean the car manufacturer himself?

[15] XQ. All right. Normally, from your own observations, do the ultimate purchasers accept this delay of three months? I assume they do not. A. No, they do not.

XQ. Assuming that they do not, what is their real alternative and just how is it normally handled in the trade?

A. Well, they go to a trim shop and buy and the trim shop installs the top.

XQ. You say the automotive dealers of new cars will go to the car manufacturers. Do they always do this? A. Go to the car manufacturers?

XQ. Yes. For replacement tops. A. Not usually, because of the delay involved.

XQ. Then according to what you say it is common practice for all of the automotive dealers of new cars to go to trim shops and companies such as yours to obtain their replacements? A. That is correct.

XQ. How long is it from the time someone comes into, say, a trim shop or retail dealer before he can get the particular top for a particular car? Manufactured by, say, your company?

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[16] A. Well, I think that would be answered in two ways. If the trim shop or car dealer have the top in stock they could install it immediately. If one of our jobbers have it in stock they could pick it up immediately. If it was a special order they could get it within a few days.

XQ. What is the maximum time delay you will normally encounter in a purchaser obtaining a top through normal channels from your company? A. A lot would depend on the geographical location of the customer but figuring someone within a one-day parcel post zone they should have it within twenty-four to thirty-six hours maximum.

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DEPOSITION OF RICHARD S. WRIGHT

July 2, 1958

[2] Mr. Wolf: First take the deposition of Mr. Wright.

RICHARD S. WRIGHT, called for examination by Defendants, being first duly sworn to tell the truth, the whole truth and nothing but the truth, testified as follows:

Examination by Mr. Wolf:

Q. Please give your name for the record. Would you please give your name? A. Richard S. Wright, 902 Roland View Avenue, Ruxton, 4.

Q. Are you an officer in Automobile Body Replacement Corporation?

Mr. Pollock: I don't believe that's the [3] correct name.

Q. Will you give the correct name? A. Automobile Body Research Corporation.

Q. Is that organized under the laws of Maryland? A. I believe it is, sir.

Q. When was this corporation organized? A. I will have to check my file. It was organized by Prentice-Hall Corporation for us. It was organized shortly before the 12th of May, 1953.

Q. Who at that time were the stockholders in the corporation? The Original stockholders? A. The original stockholders were Mr. John W. J. Ackermans, Nelson Moore and Richard S. Wright.

Q. Are they still the present stockholders in this corporation? A. They are.

Q. Has there ever been any stock transfer other than—

A. No.

[69] Q. To your present knowledge, is there any stockholder who holds stock in both Automobile Body Research Corporation and Convertible Top? A. Not to my knowledge.

Q. To your knowledge is there any director who is common to both Automobile Body Research Corporation and Convertible Top? A. Not to my knowledge.

Q. To your knowledge, is there any person, regardless of his status as an officer or otherwise, who can control decisions in both corporations? A. Not to my knowledge.

* * *

[78] Q. Does Automobile Body Research Corporation have anything to do with financing the litigation now pending in Boston? A. It does not.

Q. Does it have anything to do with—

Mr. Wolf: To your knowledge.

A. To my knowledge, it does not. No monies have been withdrawn for that purpose.

Q. Does it have anything to do whatsoever with making decisions as to who Convertible Top shall sue or how the litigation shall be conducted? A. It does not.

Q. Has anyone from Convertible top, either an officer, stockholder, director or counsel ever approached anyone in Automobile Body, to your knowledge, any officer or director? A. They have not.

Q. Let me finish the question. —to secure any evidence of Aro for use in litigation in Boston? A. They have not approached—

[79] Mr. Wolf: They have not approached you, is that correct?

A. They have not approached me or Mr. Wharton for any information in the case of Aro vs. Convertible.

Mr. Wolf: To your knowledge?

A. To my knowledge.

Q. Are you familiar with the progress of the litigation

now pending in Boston? A. Other than as I have, as a result of this subpoena.

Q. Your answer was, none other than that? A. What is it all about? That's the extent of my familiarity.

Q. Has anyone ever written you or contacted you to tell you what has happened during the pendency of the litigation other than the subpoena in question? A. Not other than the subpoena.

* * *

[89] Q. I refer back to Exhibit 5, which refers for example to the unit selling price of various items of the General Motors tops? A. For what year?

Q. For 1955, and I note they range in price from approximately $73 to $145, for Cadillac, $30 to $60 for Chevrolet, $37 odd to $67 odd for Oldsmobile. A. Oldsmobile.

Q. $41 to $72 odd for Buick? A. $99 odd half way down the page.

[90] Q. $99 odd for Buick. $32 for the Pontiac. Are these typical selling prices for each of the royalty purposes involved? A. That's correct, to the best of my knowledge.

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[12] Mr. Pollock: Thank you. Then I offer in evidence as Plaintiff's Exhibit No. 1 a certified copy of the patent here involved. This is Mackie-Duluk Patent 2,569,724.

[Certified copy of patent in suit marked Plaintiff's Exhibit No. 1.]

Mr. Pollock: I offer in evidence as Plaintiff's Exhibit No. 2 a certified copy of the file wrapper and contents of Mackie and Duluk patent 2,569,724.

[Certified copy of file wrapper and contents of patent in suit marked Plaintiff's Exhibit No. 2.]

Mr. Pollock: I offer in evidence as Plaintiff's Exhibit No. 3 a certified group of instruments taken from the records of the United States Patent Office showing the chain of title between the original inventors, in the patent here involved and the present plaintiff.

[13] [Certified group of instruments from United States Patent Office showing chain of title marked Plaintiff's Exhibit No. 3.]

Mr. Pollock: As Plaintiff's Exhibit No. 4 I offer in evidence a stipulation which has already been filed in this Court dated on behalf of attorney for the plaintiff on January 4, 1957, and on behalf of the attorney for the defendant on January 7, 1957, which relates to the title of the patent here involved.

[Stipulation relating to title of patent in suit marked Plaintiff's Exhibit No. 4.]

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[14] HAROLD SHAPIRO, Sworn

Direct Examination by Mr. Pollock

Q. Would you please state your name and address? A. Harold Shapiro, 5 Cynthia Road, Newton Center, Massachusetts.

Q. How old are you? A. 37.

Q. Are you the Harold Shapiro who is one of the defendants in the present action? A. Yes, I am.

[15] Q. What is your occupation? A. My occupation is factory manager.

Q. Has this always been your occupation? A. Yes.

Q. In one of your depositions didn't you identify yourself as a pattern maker? A. Yes, a pattern maker and factory. That all goes in the same category.

Q. What is your association with the defendant Aro Manufacturing Company? A. I'm part of the corporation. I own stock in the corporation, and that's it.

[16] Q. Are you an officer? A. I am a director.

Q. You are a director. What work do you do for Aro Manufacturing Company in your capacity as an employee or director or what-have-you? A. I make the patterns and do the hiring, firing, and make final decisions.

Q. What is your relationship to the defendant Aro Top Sales Company? A. I am an inactive partner.

Q. Would you please tell the Court who Mae Shapiro is? A. Mae Shapiro is my mother.

Q. What is your mother's relationship to Aro Manufacturing? A. She is a stockholder.

Q. Is she an officer or director? A. She is President and Treasurer.

Q. President and Treasurer. What is her relationship to the Aro Top Sales. A. She is an inactive partner.

Q. Would you tell the Court who George Shapiro is? A. George Shapiro is my brother. He is a stockholder in Aro Manufacturing Company, inactive, and he is active as Sales Manager with Aro Top Sales.

Q. He actually does the selling? A. He goes out on the road, yes.

[17] Q. Who is Marshall Shapiro? A. Marshall Shapiro is my younger brother, who now resides in Chicago, and

has not worked for Aro Manufacturing Company for a period of about three years.

Q. Is he a partner in Aro Top Sales Company? A. I believe he still is a partner, yes, inactive.

Q. Who is John Raymond Hamlin? A. John Raymond Hamlin is inactive in Aro Manufacturing Company, and is connected with sales with Aro Top Sales.

Q. Is he a partner in Aro Top Sales? A. He is a partner in Aro Top Sales.

Q. Mr. Shapiro, I would like to invite your attention to Plaintiff's Requests for Admissions, No. 1. Would you actually like to see that or I can read it to you? A. You may.

Q. Plaintiff's Requests for Admission, No. 1, reads as follows:

> "Defendant Aro Manufacturing Company, Inc., is a corporation duly organized and existing under the laws of Massachusetts and all of its manufacturing operations since the grant of the patent in suit have taken place in Massachusetts. Defendants Mae Shapiro and George Shapiro are residents of Massachusetts."

You admitted under oath that was true. Is this still true? [18]. A. Yes.

Q. All of the manufacturing operations of Aro Manufacturing Company occur within the Commonwealth of Massachusetts, is that right? A. Yes, sir.

Q. What is done with the tops after Aro Manufacturing Company actually completes its manufacture of them? A. The tops are sold or they are put in inventory, and when we receive an order to ship a top or several tops the order is sent to the Aro Top Sales and Aro Manufacturing in turn sells these tops to Aro Top Sales and they are shipped out.

Q. So in the case of every top manufactured by Aro

Manufacturing Company there is an initial sale within the Commonwealth of Massachusetts to Aro Top Sales Company? A. Yes.

[19] Q. By reason of this partnership, however, there is a sale of every Aro top within the Commonwealth of Massachusetts? A. Yes.

Q. I believe you heard my opening statement, Mr. Shapiro? A. Yes.

Q. Do you recall my mentioning the Trim Shop which your company maintains? A. Yes.

Q. I believe you and I have actually been in this Trim Shop? A. Yes, that's right.

Q. What company is it that actually maintains that Trim Shop, is it the Sales Company or the Manufacturing Company? A. The Sales Company.

Q. What do they do in that Trim Shop? A. We don't solicit business for our Trim Shop. The Trim Shop originally was set up more or less as a laboratory, the same as anybody has to have a laboratory to prove their product, to find easier and better ways of installation, making patterns. Our patterns are made by actually fitting a car that the old top has been taken off of, and we do, well, I would say 90 per cent of the trim business we do is through people that have known us over the years. We do not advertise in any public medium for this type of work.

Q. Have you ever actually installed tops in your Trim Shop? [20] A. Yes, we have.

Q. Have you actually installed Aro tops for 1950 to 1954 General Motors cars in that Trim Shop? A. Yes.

Q. For all models of those cars? A. Yes.

Q. Have you installed them since, say, January 2, 1954? A. Yes.

Q. And continually to date? A. Yes, that's right.

Q. Would the same answer apply as to Aro tops applied to 1952 to 1954 Ford and Mercury automobiles? A. Yes.

Q. And 1952 to 1955 Lincoln automobiles? A. Yes, we do.

Q. Over the years you have consistently replaced tops within the Commonwealth of Massachusetts? A. Yes, we have.

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[21] Q. After these tops are sold to Aro Top Sales Company, who do they in turn sell the tops to? A. They are sold through our jobbers or distributors throughout the country.

Q. Do you have jobbers or distributors in the Commonwealth of Massachusetts? A. Yes.

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[22] Q. You sell directly to jobbers in Massachusetts? A. We sell directly to the shops in Massachusetts.

Q. Aro Top Sales sells to shops in Massachusetts? A. Yes.

Q. On a country-wide basis what percentage of your sales would you say go to jobbers and what percentage go to trim shops? A. I would say about two-thirds to jobbers.

Q. And one-third to trim shops? A. Yes.

Q. What percentage of your sales go to the ultimate consumer, the do-it-yourself man on the street? A. It is negligible.

[23] Q. So in effect you are saying that practically none of your tops go to the actual, the ultimate consumer directly? A. Well, let me change my statement there. I was thinking of present-day tops. Going back to 1952 I would say that in Massachusetts the percentage would be much larger than other sections of the country, outside Massachusetts, where we didn't sell directly to

consumer. What our distributors did we don't know. We only sold to them. But in Massachusetts I would say, oh, about three or four percent would be sold to a do-it-yourself user, a person not trained in the arts, in other words.

Q. You say that when one of your jobbers gets one of your tops you do not know what he does with it? A. We assume he sells it to a trim shop because that is his form of trade.

Q. As a matter of practice, does either Aro Manufacturing Company or Aro Top Sales Company actually know what happens to its tops once they are shipped out? A. No.

Q. Do you care? A. Yes.

Q. So you care what model cars they go on, for example? A. I don't get what you mean.

Q. Would you like to make sure they are properly installed? A. Well, naturally we would care if they were properly installed, [24] and I think if they were not properly installed, I don't think we would get any more business from that section or that particular account because they never blame themselves, they always blame the top.

Q. Does Aro Manufacturing Company or Aro Top Sales Company ever make any effort to determine just how their tops are installed on cars in general? A. Yes. We have recently put on demonstration clinics in certain localities.

Q. Where was this? A. We did one just recently in New Haven, Connecticut. We did one in New York in 1955 at the National Trim Show. We did one in 1956 at the National Trim Show in Chicago.

. . . .

[25] Q. Now after the top goes to this purchaser, do

you then try to find out what the reason was for the purchase? A. No.

Q. Do you then try to find out how he puts it on? A. No. We just assume that the top goes to a shop that is qualified in putting it on, and we assume it goes on right. If it does not, they certainly let us know about it.

Q. Do you ever sell top fabrics for original installation? A. Do you mean a finished top?

Q. I mean for cars coming off the Ford Motor line assembly, for example? A. No.

Q. You do not sell any tops for original installation? A. The only original installation things we sold to Ford were some rear curtains in 1955, because they had so much trouble with theirs, their zippers falling in. We were doing [26] a lot of replacements for Ford. They decided to buy twelve and put them on the line. They figured if ours went on originally they wouldn't be going to another shop after they were delivered.

Q. They bought twelve, did you say? A. Yes, twelve on a 1955 Ford.

Q. Have you ever done any other work for Ford? A. Oh, yes.

Q. I mean with relation to the top fabric as original equipment? A. Yes.

Q. What work have you done? A. We have installed Aro tops on 1954, 1955, 1956, 1957, 1958, Ford, Mercury and Lincoln.

Q. As original equipment? A. No, as a factory replacement.

Q. No. I am speaking of original equipment. A. Original? No.

Q. You have never done any original work for them. A. No.

* * *

Q. Have you ever done any original installation work

for the General Motors Corporation? A. No.

Q. Have your tops ever been used as original installation equipment? [27] A. No. One thing I might interject, Mr. Pollock, is that awhile back when I considered purchasing a new car I even inquired to see if I could buy a car without a top. They wouldn't even sell me a car without a top.

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The Court: I am not talking about a car that you never [28] saw before. I am talking about my hypothetical 1954 Buick. Is your top better than the top that came with that Buick? I am assuming the top that came with the Buick new. It is four years old today. But is your replacement top an improvement over the top that it originally had?

The Witness: I would say, your Honor, it would be equally as good. I don't think it would be better and I don't think it would be worse. But that would depend upon the quality of the fabric. Assuming you bought a new top, the quality of the fabric that was used, the stitching, the cut.

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[29] Q. I would like to clarify this point. Are you saying that with or without the cushion you got substantially the same amount of water in? A. I would say that—well, yes, I would say that.

Q. Do I understand that for all practical purposes you say the cushion is not really effective in keeping water out? A. I say that, yes.

Q. You say the cushion is not important? A. That's right.

• • •

Q. I hand you a paper and I ask you to look at it. It is your answer to Defendant's Interrogatory No. 10. Is this your signature? A. Yes, it is.

[30] Q. Would you please read your answer into the record?

A. "Defendants are informed that there is a reasonably possibility that the following automobiles having tops of original manufacture might be considered to read upon one or more claims of Patent No. 2,569,724: 1952-1954 Ford Mercury, 1952-1955 Lincoln, 1950-1954 Cadillac, Oldsmobile, Buick, Pontiac and Chevrolet."

[31] The Court: It makes no difference whether it has a cushion or not?

The Witness: Your Honor, the 1953 Pontiac and the 1954 Pontiac, the framework of the car itself is identical. We use the same top for the 1953 and the 1954 Pontiac and Chevrolet, which are identical. The 1953 had these wiper arms that are in discussion here, and the 1954, a wiper arm was not used but a stationary bar was secured inside the car in lieu of the wiper arm.

Q. On all models of the 1954 Pontiac? A. All 1954 Pontiacs and Chevrolets, all that I have seen.

Q. We have seen different cars then, I am afraid. A. Well, you see, a 1953 and a 1954, unless you actually had the body number of the car you almost couldn't tell them apart. The convertible top is interchangeable in every respect to size, shape, fit and function.

Q. On the 1953 and the 1954? A. That's right.

Q. It is interchangeable in the same regard with the original fabric? Is your replacement interchangeable in the same regard? [32] A. Yes.

Mr. Pollock: Would you like to ask another question or two, your Honor?

The Court: I seem to be getting into a question that does not raise the point I wanted to ask. I have a 1953 Pontiac now.

The Witness: All right. The original 1953 Pontiac was constructed with a cushion and a wiper arm, with the wiper arm pressing against the cushion causing a watertight seal.

Q. Could some water get past the watertight seal? A. It is not very possible.

Q. What is the trough in there for? A. I don't know.

Q. Go ahead. A. It basically was a securing place for the flap that goes down inside and holds it down snug. The flap is secured to that trough.

Q. You are saying that until your invention or until your change came along the trough was completely useless? A. I don't say it was completely useless. It is possible that the wiper arm might have fallen off in instances, or anything could have happened. It could have got bent and let the water in, and the water would go in the trough. It was sort of an auxiliary precaution.

Q. Do the wiper arms bend easily? [33] A. No, but they get lost. They are only held on by one screw, and the top is pivoted on that particular screw, and it is possible they do unwind.

Q. You are telling us that General Motors Corporation put a part into their car which under most circumstances performed absolutely no function? A. I didn't say "no function." I said it was an auxiliary precaution.

Q. All right. Continuing with the Judge's inquiry, we have this 1953 Pontiac with the cushion in it? A. Yes.

Q. The top becomes dirty and it is taken off and is replaced with one of your Aro tops without a cushion A. Let's say the top was slashed or torn, or something like that, for whatever reason. They don't replace them for being dirty.

Q. Well, for reasons of curiosity.

The Court: How do you know they do not replace

them for being dirty? Somebody might like to have a brand new shiny top every year.

The Witness: Well, your Honor, generally they are replaced because they leak or the stitching is gone or there is some emergency. I am basing that on what comes into my own trim department. When they come in they sure need it.

Q. We have put on one of your replacement tops without a cushion. A. Yes.

[34] Q. Does the water get into the car? A. Some does. Some is shed off with the shingle.

Q. From a net result point of view, looking at the final net result, does your top without the cushion operate better, worse, or equally as well with the original? A. I would say better.

Q. You would say better? A. Yes. First of all, we have gained the ultimate result. We have put on a top that looks well, fits well, and to the ultimate consumer it is waterproof. In other words, all water is taken care of by drainage or shedding or something like that, in other words, no water is getting inside of the car, the upholstery or the floor mats.

Q. From a net result point of view it is still waterproof without the cushion? A. That's right.

Q. This is your top? A. Yes. Now we go to why I think it is better.

Q. All right. A. The pressure of the wiper arm against this cushion causes a very, very tight seal. Consequently, when a top goes up and down there is considerable wear and chafing and tearing that is encountered between this watertight seal, between the wiper arm and the body.

The Court: When the top goes up and down doesn't the wiper arm move?

[35] The Witness: Yes, your Honor.

The Court: Does it maintain this pressure?

The Witness: Once it leaves the body it relieves the pressure, but coming back up again, in order to put pressure against the material again, it does have a wiping action and pressing again. It does slide off the fabric, and consequently both sides of the fabric slide off the fabric.

[36] Q. Is this even with your replacement top? A. No. The replacement top is designed with the shingle above the body line so that there is a space between the wiper arm and the tonneau or the body of the car.

Q. Continue with why you say this top is better, your top. A. In that respect. There is no chafing action.

Q. You are still able to keep water out of the car? A. I would say 75 per cent of the water would run off the car if the car were standing still and the balance would be taken care of by the drainage system.

Q. Again we are talking about without a cushion? A. Yes.

Q. Let's look at this from the point of improper access. You say you have a little gap between the fabric and the belt of the car? A. That is General Motors?

Q. 1953 Pontiac. A. Yes.

Q. Can people reach into that gap? A. No.

Q. How big would you say it was? A. I would say ⅜ to ½ an inch.

Q. Could you reach a hand in? A. No.

Q. A finger? [37] A. No. Yes, you could put your little finger in, but not enough to take anything out of the car. The common practice, if I may interject, is, people don't bother, if they want to steal something, they don't bother unsnapping. They just take a knife and slice it out.

The Court: That happened to my car and I had nothing but snaps.

The Witness: That's right. They could have easily opened it up.

The Court: Very easily.

* * *

Q. Now, as I understand it, your company manufactures a number of differen parts; is that correct? A. Yes.

* * *

[38] Q. Looking at the second page of this exhibit you will note that there is a listing or cataloging of all your different part numbers? A. Yes.

* * *

Q. Of these 140 part numbers, they are all replacement top fabric, are they? A. Yes.

Q. Are these different part numbers different in shape and size? A. At the time of this printing, we considered them all different.

Q. Were they designed for different cars? A. Yes.

Q. Of these 145 numbers, what is your part number for the 1952 to 1954 Ford automobile? A. 134.

* * *

[39] Q. Will that one part number fit any other automobile listed on this exhibit? A. It is possible.

Q. You don't know of any? A. No.

Q. What is your part number for the 1950 to 1954 General Motors lines, whichever ones you think apply here? A. 224, 226, 230, 231, 232, 233, and 234.

Q. Are all of those part numbers still used, or are some of them duplicates? A. Some of them have been incorporated. 230 and 231 are the same. They are 231 now. 234 has been incorporated with 226, so they are all 226's now.

Q. So, in effect, you have five different part numbers for the General Motors cars? A. That's right.

Q. You have one part number, 134, for your Ford automobiles? A. And 509 for the Lincoln.

Q. That is for the 1952-1955 Lincoln? A. Yes.

Q. So we have these seven parts with which we are concerned, of the 140 that are listed? A. Yes.

[40] Q. Of these various part numbers which you have identified, and I don't have a listing, I now invite your attention again to Exhibit No. 7 and I note that this exhibits says, Aro tops have an accurate pattern for every convertible model from 1928 on, insuring custom tailoring, precision of fit. Is that a true statement? A. Yes.

Q. You say you have an accurate pattern for these tops? A. Yes.

Q. Who made the pattern? A. I did.

Q. When you made the pattern were these tops specifically designed for installation on the cars of which you speak? A. Yes.

Q. And as I understand it, they will not, to your knowledge, fit on other cars? A. That's right.

* * *

Q. I invite your attention also to the fact that in speaking of the design, Plaintiff's Exhibit No. 7 states that the Aro tops are custom tailored for each car and model. Is that a true [41] statement? A. Yes.

Q. These are custom tailored for each car and model? A. Yes.

Q. Under the heading, Construction, the brochure says it is identical in design with original top. Now, disregarding seams and the like, just concerning yourself with shape, is that a true statement? A. I would like to elaborate a little bit, Mr. Pollock, if I may.

Q. Go ahead. A. We say identical to original design, we mean when a Ford is going down the road, it doesn't look like a Chevrolet and primarily, it is where the seaming is. In other words, just where we put our stitching. It doesn't mean if Chevrolet has their rear seams veed

in and Ford has theirs straight down, we would vee them in and make them look like a Chevrolet.

Q. Directing your attention to the rear quarter of the automobile, are your replacement tops shaped the same way? A. No.

Q. What is the difference? A. The difference is in the section going down inside. Our tops go down inside, but we have this shingle above the body and they had a weather tight cushion.

Q. Concerning ourselves with just the flap inside the car, is [42] that the same shape as the original top? A. Fairly close, yes.

Q. It is still of the proper length to come down and attach to the trough? A. Yes.

Q. And so that it passes the wiper arm for cooperation therewith? A. Well, yes. If it goes down to the trough it has to pass the wiper arm.

Q. So that original differences you say exist between the original and replacement tops are concerned with the cushion or shingle or the like? A. Yes.

Q. But from a general outline shape we have this same sort of construction; is that correct? A. Yes.

Q. I would like to show you a top, Mr. Shapiro. [Brief pause.] I believe you have seen this before, but I would like you to look at it and identify it, if you can. You can open the box. A. First I would like to call the Court's attention that this top was made in February of 1953.

Q. Who made it? A. Aro Manufacturing Company.

* * *

[43] Q. Now, do you know what car this top was designed for use on? A. It was designed for the 1950-1951-1952 Chevrolet, Pontiac and Olds 88.

Q. We have been talking about a flap adapted to extend inside the car. Do you have such a flap on this top? A. Yes, this is the flap here.

Q. Would you indentify it, say, by—. Put a numeral 10 on that flap and sign your name. A. [Complying.]

Q. That is the flap which we have been speaking about which is adapted to extend down below the belt line? A. Why don't we draw the body line in there and then I think the Judge can get a better idea.

• • •

A. [Continued] This is the body line right here.

The Court: I notice where you have marked the body line appears to be some thickness. Is that a cushion?

The Witness: That is the cushion.

Q. As I understand it, this top with the cushion in it, this is the way General Motors originally made it? A. Basically the same, yes.

Q. When you got notice of infringement, did you remove this [44] cushion? A. We removed the cushion and completely changed our design.

Q. Did you change the shape of the fabric down here at all? We are talking about the flap which we have identified at 10. A. Well, the shape is different, prior to assembly. In other words, we now bring this up and around and bring the flap down this way.

• • •

A. The overall shape of this flap down below was principally the same.

Q. So that once you got notice of infringement you removed the cushion and put a shingle on it, but you left the shape and the existence of the flap just as it was before. A. Yes.

Q. Would you say that except for the cushion this top typifies the part numbered 224 as you sold it after January 2, 1954, except for the cushion, as I said? A. Yes.

Mr. Pollock: Your Honor, I would like to offer this in evidence as Plaintiff's Exhibit No. 10.

[Aro top typifying part No. 224 as sold after January 2, 1954, marked Plaintiff's Exhibit No. 10.]

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[47] Q. I show you a box and ask whether you can identify it? A. Yes. This is Aro Part 134, all black top, and fits the 1952 to 1954 Ford and Mercury.

Q. It says right on the box that the top 134 fits the 1952, 1953, and 1954 Ford and Mercury? A. Yes.

• • •

Q. Will it fit any other cars that you know of? A. No.

Q. Is the reason it fits both the Ford and Mercury because the body shell is the same on the two cars? [48] A. Yes.

• • •

Q. Does this part No. 134 have a cushion in it? A. No.

Q. This is the way you were making your 134 after you got notice of infringement? A. Yes.

Q. You dropped the cushion? A. Yes.

Q. Does this have the long flap of which we have been speaking adjacent the rear quarter of the car? A. Yes.

Q. Is this flap designed to go down inside the car again? A. This flap was tested by us and it can be secured or it doesn't have to be secured. It is immaterial. It works equally as well both ways.

The Court: The question was not whether it was secured but whether it was designed to go down inside the car.

The Witness. Yes, it was.

The Court: If it is not secured what happens to the trough?

[49] The Witness: Well, the trough is located just above the fender well of the car. Any water coming into the fender well will run right through and out a bottom drain, in fact one and the same drains used on the side windows of the automobile.

Q. It will run right down what? A. The fender well.

Q. Will it run down the fabric, too? A. Yes.

Q. If the fabric is not secured where would this water go? A. Down the fender well. If it was secured it would go in the trough.

Q. In a proper installation, where we are trying to use the trough for its intended purpose, you should secure this flap to the trough, is that correct? A. Yes.

Q. That is what the flap is there for? A. Yes.

The Court: But if it is not secured, and there was another place the water would go, it would go out from that, too?

The Witness: Yes, your Honor.

The Court: Is it peculiar to that particular model car or is that so generally?

The Witness: It is so generally, your Honor. It would take the same drain, the side windows and doors and rear quarter [50] windows would take when the water runs down there. There is a drain underneath the rocker arm, and there is another drain at the rear of the fender that the water would run out.

Q. If the flap is not attached to the trough is there any purpose in providing the flap at all? A. Yes.

Q. What is that purpose? A. To keep enough material down below the body line, keep it from blowing out or being pulled out. In other words, if we cut it short at the body line part of it is liable to go outside the car.

Q. Would that make any difference to you? A. Yes. It would probably be unsightly or cause tearing in the wind.

Q. By the same token, if this fabric is loose isn't it likely to flop out? A. It isn't loose because—may I see this, please?

Q. Yes. A. The fact is this top is secured here and here [indicating].

Q. You mean at the ends of the flap? A. Yes. The longitudinal strain prevents it from falling in.

Q. In a proper installation, as you intended it, in a proper installation this flap should be secured to the trough, isn't that correct? A. Yes.

• • •

[51] Q. Mr. Shapiro, do you recall that we took your deposition at one time, and at that time you had some cars available on which you had mounted replacement top fabrics of your company's manufacture? A. Yes.

• • •

Q. I will hand you this copy, Mr. Shapiro, and I will ask you to identify what the car is and what the top fabric is on it? A. That is part No. 231, a 1953 Oldsmobile.

Q. Does this picture show the replacement top fabric as having a long flap of the type we have been describing? [52] A. Yes, it does.

• • •

Q. That is the long flap? A. Yes.

Q. In this installation, does the installation include a drain trough? A. Yes, it does.

• • •

Q. Is this long flap attached to the drain trough, the flap 15? A. Yes.

Q. Are the attaching means shown in this drawing or in this photograph, I should say? A. Yes, they are screws.

• • •

Q. Does this include a wiping arm? A. Yes.

• • •

[53] Q. If you will take a lead line from there it perhaps would show up better. This long flap, properly installed, is attached at the trough, to the trough on its bottom, is that correct? A. Yes.

Q. And it passes down between the belt line of the car and this wiping arm, is that correct? A. Yes.

Q. This is one of you replacement tops? A. Yes, it is.

Q. Is this the way you presently make your replacement tops for this car? A. Yes.

Q. Is this the way you make it over the years, since 1954, let us say? A. Yes.

Q. And the same installation applied for this model car over this period of years? A. Yes.

Q. I show you another photograph which was taken at this time, and which has the numeral 15 on it, and I ask you whether or not you can identify what the car is and what the top fabric is on it? A. This is part No. 134.

Q. Is this your part No. 134? A. Yes.

[54] Q. On what kind of car? A. On the 1952 to 1954 Ford. This is the 1953 Ford.

Q. Does this fabric again have this long flap adjacent the rear quarter? A. Yes, it does.

• • •

Q. Is there a trough in this area, a drain trough? A. Yes, there is.

• • •

Q. Is this long flap which we have been discussing attached to that drain trough? A. Yes.

Q. Adjacent the bottom of the flap again? A. Yes.

Q. Is there a wiping arm in this construction? A. Yes.

• • • •

[55] Q. Again this long flap on your replacement top 134 passes between the wiping arm and the belt line? A. Yes.

Q. Down to the trough where it is fastened? A. Yes.

• • •

[56] I hand you another photograph and I ask you whether you can identify this photograph? A. Yes. This is the same car, No. 134, 1953 Ford with an arrow top.

• • •

Q. I am going to outline in ink certain assemblies on the outside of the car and I ask you to tell me what they are. A. Those are fasteners located on the outside of the car.

Q. Studs?

[57] A. They call them boot studs for putting the boot on.

Q. These are snap fastener parts that are already on the car? A. Yes.

Q. Are they on all convertible cars of the 1952-1954 Ford line? A. Yes.

Q. And the Mercury line? A. Yes.

Q. Lincolns as well? A. Yes.

Q. How about the 1950-1954 General Motors cars? A. Yes.

Q. These are fasteners already on the car? A. Yes.

Q. Would it be possible for you, as a pattern maker, to design a top for replacement on this car adapted to snap on these fasteners already on the car? A. Yes.

Q. In other words, you could have designed replacement parts which would have snapped on the existing studs? A. Yes.

Q. You did not do that? A. That's what I started to say before. This particular top on this car now, without any alterations, can be put on those [58] fasteners.

Q. But you would have to put snap fasteners on them? A. Yes. The same thing would apply to all factory equipment. The fasteners are put on the last thing.

Q. You could have made a replacement top which could snap onto the car? A. Yes.

Q. Was there any reason for not making such snap fasteners on tops? A. No. There is no reason for not making it, but the way it is constructed now, it has been used in both manners of installation. In other words,

if a man didn't want to crawl inside and get all dirty screwing the thing on, instead of putting the flap inside he could bring it on the outside, bend the flap up and put two fasteners on it and he is in business.

Q. But that isn't the way your top is originally designed? A. No.

Mr. Pollock: I offer in evidence as Plaintiff's Exhibit No. 14 a photograph of a Ford automobile showing the boot studs on the outside thereof.

[Photograph of Ford automobile marked Plaintiff's Exhibit No. 14.]

[59] Q. But you do have to make a new pattern when a new model car comes out? A. Yes, if it differs from the previous year.

Q. When the 1950 General Motors cars first came out with this construction on it, did you have to make a new pattern for that model car? A. Going back to 1950, we have a part No. 223 which fits the 1949 Chevrolet, Pontiac and Oldsmobile. When the car first came out it looked so identical to the 1950 that came out, except for the flap that goes down inside; that we used the same pattern for our 1950 by taking the 1949 and just adding that bottom quarter section.

Q. You added the extra section at the rear quarter? A. Yes.

Q. Why did you add that? A. Because the original was put on that way.

Q. You wanted to put it on the same way the original top was on, on the 1950? A. That's right.

Q. What happened when the 1952 Fords first came out with this construction? A. We made a top—we made a completely different as far as [60] looks are concerned, with the 1952 Ford, because they had a very, very tremendous wrap-around curtain that was probably twice the

size of what is on the cars now and that particular car caused an awful lot of zipper trouble and so forth in the industry, and the cost of replacing the curtain was very costly, so I designed a Ford top which is very similar to the one we are using today and we noted a space between the wiper arm and the body—

Q. This is in 1952? A. Yes. And we installed a pad to fill up the space. Then we encountered quite a bit of trouble on the tops going up and down, pinching in that area, because of the nonuniformity of the space between the wiper arm and the body. Some were very loose, you couldn't put enough padding in them, and some were tight.

Q. Could you adjust the wiper arm? A. Not to my knowledge. We never attempted it and we never saw any adjustment for it. When this letter came in from Mr. Hall, the thing which seemed to be in question, in a conference between my patent attorney and myself, was the fact that we were using a cushion, so we switched to a shingle.

Q. On this switch, was this considered—when you switched from the cushion to the shingle, did you consider this was going to make the top work poorer? A. No, sir.

• • •

[61] Q. It was going to work the same way even with the shingle on it? A. Well, yes. Instead of relying on a nonuniform pressure of the bar against the padding on the cushion, we were going to install a shingle above the body line and let the water go in and then use the trough to take the water out.

Q. And the net results would be precisely the same? A. We thought so. By raising and lowering the top several times we found in some instances the shingle was wearing out because of the nonuniformity of the car and we tried

one without, and we took a bucket of water and sponges and so forth and put as much—simulating rain, and we found the trough took care of the water and we didn't need the shingle.

Q. So the fabric itself took care of the water, the fabric and the trough? A. We let the water in the car and let the trough take care of it. The fabric more or less acted as a guide for the water, that's all.

Q. But the fabric did act as a guide for the water? A. If there was no fabric there, it certainly wouldn't run down the drain.

Q. It was guided by the fabric into the trough? A. Yes.

Q. I am concerned with how you went about making a pattern for the 1952 Ford. This was a different car from the 1951? A. Yes. First of all we take the old top off, take everything [62] off but the pads; that is the two long pads, and we fitted it just like a custom suit is fitted. We put the material in position and stretch it around, mark it with chalk and transpose it onto paper.

Q. At the rear point did you also fit it, at that point? A. Yes, we just pull a straight piece of material down through.

Q. Down through where? A. Between the body and the wiper arm.

Q. Down to the trough? A. Yes.

Q. Then you got it to the proper length at that point to attach it to the trough? A. Yes.

Q. Now, when you made these various changes you are talking about in 134 for the Ford, when you dropped the cushion and put the shingle in and then dropped the shingle, did you actually redesign as to the shape of the flap that you were working with? A. Yes, we did change the shape of the flap somewhat. The Ford flap originally, on the rear end of it, it came out in some sort of an elongated hook fashion and we came down straight.

[63] Do you recall, Mr. Shapiro, during the deposition which I have discussed previously, I asked you a series of questions relating to the actual construction we had seen on your 1953 Ford with the part No. 134 on it? I would like to ask you those same questions now to see whether or not you still agree with the answers you gave at that time. As you will recall, Mr. Shapiro, during this test we saw a 1953 Ford with a top No. 134 on it as manufactured by your company; is that correct? A. That is correct.

Q. I am not asking you to identify what parts were made by the Ford Company or what parts were made by your company, but I will ask you to recall that overall structure as it was sitting in the trim shop of Aro Top Sales Company, and ask you whether or not [64] that overall structure included a convertible automobile body? A. Yes.

Q. And that convertible automobile body, as I recall it, had a lower metal body structure; is that correct? A. What do you mean by a lower metal body structure?

Q. A lower metal body structure. A. The tonneau?

Q. Yes. There was a panel inside of that car adjacent the rear quarter, wasn't there, for supporting a trough? A. Yes.

Q. And there was a trough or a rain gutter on that panel; is that correct? A. Yes.

Q. Now, did this car that we saw also have a folding bow structure supported by the tonneau? A. Yes.

Q. And did this folding bow structure that we saw have flexible top material supported on it? A. Yes.

Q. Now, did that top material include a rear quarter section? A. Yes.

Q. And did that rear quarter section include a part that

extended down inside of the car below the top of the tonneau? A. Yes.

[65] Now, the lower edge of that extending flap was fastened on the inside of the car, wasn't it? A. Yes.

Q. It was fastened to the trough, wasn't it? A. Yes.

Q. And a portion of the rear quarter section was spread out, wasn't it, adjacent to the inside of the tonneau? A. Spread out?

Q. The material was spread out? A. Taut?

Q. It was spread out along the belt line? A. Yes.

Q. Now, there was a wiping arm attached to the folding pillar, wasn't there? A. Yes.

Q. And it was pivoted to the folding bow, wasn't it? A. The folding pillar was, yes.

Q. And it moved when that folding pillar moved, didn't it? A. Yes.

Q. The wiping arm moved as well, do you recall that we actually went inside of that car and saw exactly how the wiping arm moved during the raising and lowering of the top? A. Yes.

Q. And do you recall that we saw that this top, as it was being raised, the wiping arm was actually touching the fabric? [66] A. I don't remember that so precisely.

Q. Let me show you your deposition on that point. I show you page 83 of your deposition dated February 20, 1957, and I will read Question No. 363 to you.

"Q. Do you also recall we examined how that wiping arm moved during the raising and lowering of the top and do you recall it was touching the fabric as the top was raised? A. Yes."

Does that refresh your recollection as to what you saw at that time? A. Yes.

Q. Do you agree when the wiping arm was moving in this top, it was actually touching the fabric? A. Yes.

• • •

[67] A. The fact that it touched it, I imagine it pushed it in somewhat but not an appreciable amount.

Q. You are saying it pushed it somewhat toward the belt line of the car? A. That's right.

[68] Q. This top we have been discussing did not have a cushion on it, did it? A. No.

Q. Would this same discussion that we have just had as to the various parts and their operation apply as well to a General Motors car of the 1950 to 1953 vintage, say, with an appropriate top as manufactured by your company on such a car? That is, would it have these various parts we have been talking about? A. Yes.

Q. Would these parts operate in the same way? A. Yes.

Q. Again the top would not have a cushion? A. That's right.

Q. Would you consider the cushion to be of importance in these replacement top structures or in the original top structures? A. No.

Q. You would think the top works as well with or without the cushion? A. Well, I will change my phraseology. I would say that the top, the way it is made by General Motors, with the cushion was important if you desire to keep the water out. The way we make our tops, Aro makes its tops, is not to keep as much water out as possible but to direct it out after it is in; very similar to the way cars are made for 1955 and—

• • •

[69] Q. So in effect isn't it true that what you did by dropping the cushion was merely to let some more water in than might otherwise get in? A. Well, the shingle we put on the top—I think the way we make ours was not so much worrying about where the water goes, because we made quite a few tops and never had any complaints on leakage. I think the primary purpose for the way we do it is to prolong the life of the top.

Q. I believe you have testified that 90 per cent of the purpose of the top is to make it leakproof? A. Yes.

Q. Do you still agree with that statement? A. Yes.

Q. Concerning this question of keeping water out of the car, isn't it true that by dropping the cushion you merely let in some more water than would otherwise get in? A. Yes.

Q. But the trough was already in the car? [70] A. That's right.

Q. It was there to handle water that got into the car, wasn't it? A. Yes.

[71] Q. Let us consider the Ford for the moment. In the Ford car can the trough handle any water that gets in even when you haven't got a flap and when you haven't got a cushion? A. Yes.

Q. And you merely let in some more water than might otherwise get in if you had a cushion, is that correct? A. That's right.

Q. In your first deposition, Mr. Shapiro, you testified as follows—well, I should say that I asked you the following:

"The witness has testified, as I understand it, that even if they would put a top, that top 134 on to a Ford car without a cushion or a flap it will still keep the water out of the car."

And the answer to that, that you gave:

"It is still watertight. The material is still one piece going down to the trough."

I asked:

"Is it still watertight?

You said:

"Oh, yes."

[72] Q. Is it important that the material goes down to the trough? A. If it is to resemble an original structure, yes.

Q. Is it important from the point of view of keeping water out of the car? A. That it goes down in the trough?

Q. Attached to the trough? A. Yes and No.

Q. At one time you testified Yes. A. Since that deposition was taken we have conducted tests.

Q. At one time at least you thought it was important that the flap go down to the trough? A. Yes.

Q. As you make your tops at the present time, you still make them with the flap long enough to go down and attach to the trough, is that correct? [73] A. Yes, that is correct.

Q. As I understand your testimony previously, you also said that the cushion wasn't too important? A. That's right.

Q. That any water that got into or between the belt line and fabric could still go out the trough, is that correct? A. Yes.

[75] Q. I invite your attention to certain Requests for Admission and Interrogatories that you have already answered. I would merely like to read them so that we can get your answers to [76] them again. Request for Admission No. 17 reads as follows:

"The original patent for Aro replacement top part No. 134 was prepared by defendant Harold R. Shapiro, and the said part No. 134 was specifically designed by said Mr. Shapiro for installation on 1952, 1953, and 1954 Ford and Mercury convertible automobiles."

You answered that under oath: "Yes." Is that still the correct answer? A. Yes.

Q. Request for Admission No. 20 reads as follows:

"The original top equipment on the 1952 Ford convertible automobile, as manufactured and sold by the Ford Motor Company, includes a folding convertible top comprising flexible top material having a cushion therein running parallel to and in line with the belt line of the car when the top is in a raised position. This cushion is pressed against the body of the car by means of a wiper arm when the folding convertible top is in raised position. The thickness of said cushion, as originally made by the Ford Motor Company is ⅜ inch."

Is that correct, and is it still correct?

A. This is 1952?

[77] Q. 1951 original equipment. A. Yes.

Q. On that line, since the cushion thickness was only ⅜ths of an inch, wouldn't you expect that the wiper arm was designed to come within at least ⅜ths of an inch of the side wall of the car on a 1952 Ford automobile? A. No. It could come within ½ inch.

Q. Then it wouldn't even touch the cushion, would it? A. I will say ⅜ths of an inch is about the average of what I have seen.

Q. So, in other words, the wiper arm was designed to come within at least ⅜ths of an inch on the inside of the car? A. Yes.

Q. I invite your attention to Request for Admission No. 21;

"The following statements, made by Defendant Harold R. Shapiro, in reference to the folding top structures of Ford convertible automobiles, are true;

'Q. You don't think the cushion is important in the Ford car? A. No.

Q. It works as well without the cushion? A. Better.

Q. It looks as good and keeps water out without the cushion? [78] A. I would say the cushion serves no purpose.

Q. You really don't know, according to your tests, whether the top with a shingle or with a cushion did a better job or not? A. I don't know how it could do a better job if it did a perfect job without the shingle and the cushion. How good is better?' "

Was this your testimony? A. Yes.

Q. I invite your attention to Request for Admission No. 22:

"Defendant Harold R. Shapiro has personally installed an Aro part No. 134 on a 1952-1953 and or 1954 Ford and or Mercury convertible [79] automobile, within the Commonwealth of Massachusetts."

And your answer was, "Yes." Is that still correct? A. Yes.

Q. Concerning this Part 509 that we have mentioned for the Lincoln car, I invite your attention to Request for Admission No. 23, which reads as follows:

"Aro part No. 509 is a convertible top, manufactured by Aro Manufacturing Company, and specifically designed by Defendant Harold Shapiro for installation on 1952, 1953, 1954, and 1955 Lincoln Convertible Club Coupes. The following statement, made by Harold Shapiro, relating to the installation of Aro part No. 509 on one of said Lincoln Convertible automobiles, is true:

'Q. Then the material in that Lincoln car, using the 509, would again be attached to the trough and passed down between the wiping arm and inside of the belt line, and attached to the folding pillar and around the rear of the car? A. Yes.' "

Do you agree with that answer and with the rest of the material in Request for Admission No. 23?

[80] A. Yes. Would you read the answer, please?

Q. The answer as you gave it was:

"Yes, the fabric top 509 made by Aro includes a shingle. However, if more than a normal amount of these tops had been manufactured, the shingle would have been eliminated."

A. It has been eliminated.

Q. It has now been eliminated? A. It has.

Q. And other than the material which I described, other than that, it still functions in regard to the wiping arm in the manner we have been discussing? A. Yes.

Q. Request for Admission No. 24:

"The following statement made by Defendant Harold R. Shapiro, is true:

Q. Is that part No. 509 similar to part 134 except for size? A. It is similar in installation. In fact I would say the installation is almost identical."

Your answer to that Request for Admission was "Yes."

A. Yes.

Q. Do you still agree with it? [81] A. Yes.

* * *

[83] The Court: On the Ford car the guide bar would not be touching the fabric?

The Witness: It might be touching it, but not enough to close any gap between the body line and the fabric.

Q. Does it close it at all? A. No.

The Court: It doesn't show it closed in that diagram.

Q. My point is, Does it push it at all toward the inner belt line? A. I don't think it does. It might touch it but the prolongation, according to this, if you took the guide bar away the top would fall in, which is not the case. If you took it away, even though there was a

slight pressure it wouldn't affect the looks or the [84] appearance of the top.

Q. Did this flap that you show perform any function? A. The flap, yes. It is a sort of a—we call it a shingle, it could be an eave. When the water runs down the top it uses it as a springboard and runs over the body of the car instead of into the car.

Q. Does it perform the same end function a cushion would perform? A. Only on a very straight rain. Any driving or windy rain, a considerable amount of water would pass under the shingle and down the material into the gutter.

Q. Wouldn't that same thing occur with the cushion? A. No. Nothing could get in. I haven't seen any that had cushions that it could get in.

Q. What is the purpose of the trough in the car? A. As an auxiliary means of water dispersal, if the wiper arm was disengaged or fell off or got damaged, which is very common in the industry.

Q. I show you this letter which has been identified as Plaintiff's Exhibit 9-C. I invite your attention to page 2 of the letter and I ask you to read this paragraph aloud. A. [Reading]:

> "With reference to your client's Patent #2,569,742, you will notice that in each of the claims of that patent, there is recited a wiping arm which is adapted to wipe the inside of the [85] lower portion of the top material and force it towards the inner wall of the body forming a water-tight seal. My client's construction, however, does not require or utilize such a construction, but rather operates in an entirely different fashion in which the inside of the car is waterproofed by the above-mentioned flap in much the same way as a shingle on a roof provides a water-tight seal."

Q. Do you agree with the last statement, that the car is waterproofed by the above-mentioned flap in much the same way as a shingle on a roof provides a water-tight seal? A. I would say it is as water-tight as a shingle on a house because in a driving rain shingles do let water in.

Q. And you do waterproof with your flap? A. Yes.

* * *

[86] Q. In the 1954 Fords, without the cushion, did the wiper arm push against the fabric?

* * *

A. I don't see how it could.

Q. They didn't have the cushion in there in the first place? A. That's right, but when the wiper arm is as close to the fabric as the 1950 Fords, if it did press against the fabric it would be like putting scissors inside the top. You would have a shearing action when the top is going up and down.

Mr. Pollock: I believe there is no purpose in pursuing this, your Honor. We have a witness to the contrary. That's all.

* * *

[89] *Cross Examination by Mr. Wolf*

XQ. Will you tell us approximately what percentage of your business is conducted in your trim shop? A. Oh, a sixteenth of one per cent.

XQ. Do any of the other defendants have anything to do with installations in the trim shop other than as you have already described? A. No.

* * *

[90] XQ. You previously indicated that the performance of the seal as is obtained in a Ford 134—well, a Ford automobile of original manufacture having a cushion, is, I believe, substantially perfect and the performance you

body line where it is attached to the trough, you would have to tear the recess well also, because it is all put on on the same trough. In other words, the screws go into the recess well after the prongs are set.

XQ. Then on the problem of unwarranted access to a car it is much simpler if you intend to break in, to slash the fabric rather than do it the way it is apparently proposed by the plaintiff? A. Oh, definitely. Definitely.

The Court: Take an old car before the days when there was this present arrangement, when there was nothing but some [125] snap buttons on the outside, you could reach in pretty well under those snap buttons, couldn't you?

The Witness: You could, but you couldn't reach any door handles or window regulators.

The Court: What prevented you?

The Witness: Too far away.

The Court: In other words, the length of your arm, or the shortness, rather, of your arm prevented it?

The Witness: Yes, your Honor.

XQ. I would also like you to look at Exhibit 16-B and indicate whether or not you could have reached further into the car at the time that photograph was taken? A. No.

XQ. Will you, for the benefit of the Court, again indicate what car is involved and the condition of the car in that exhibit? A. The 1953 Oldsmobile with the wiper arm removed, I was able to put my hand in up to the knuckles and then the material got extra taut because of the pressure and any more exertion on my part, I would be tearing the fabric, if I was strong enough.

* * *

Further Redirect Examination by Mr. Pollock

* * *

[126] Q. As I understand it, in the tops which had eliminated the snaps and used this long snap, could you get

obtained is about the same; is that correct? A. The ultimate performance?

XQ. Yes. A. Yes.

XQ. What do you mean when you talk about ultimate performance? A. The ultimate performance is that the interior of the car is not damaged by water. The thing is that the Ford did everything in their power to keep as much water as possible out of the car and our purpose was to let it in and direct it out through the drain.

XQ. In the 134 top installed on the 1952 or 1953 Ford—that is your 134—isn't it true all the water running down the top would actually pass between the fabric and the body of the car? [91] A. Yes.

XQ. Isn't it also true in your, I believe it is 224, using a shingle, which we call a shingle, isn't it true there still is a space between the fabric and the body of the car? A. Yes.

XQ. And isn't it true that the water does run down between that fabric and the body in a driving storm or in adverse weather conditions? A. Yes.

XQ. Will you please tell us what the importance of the—if there is any importance to the specific shape of the flap using these tops that you mentioned? I am talking about the flap that extends down inside the body of the car. A. The shape of the top is not important. It could be 4 inches longer and 3 inches narrower. It could be—it is not important as long as there is enough fabric if it wants to be secured down below, if there is enough fabric for it, but the actual shape is not important.

XQ. Have you varied the shapes yourselves, Aro Manufacturing? A. I would say that we have over the period of the years these were manufactured.

XQ. Does the Ford shape vary from the General Motors shape? A. No. Only the size. The shape is pretty nearly the same.

a wire or tool in through such a structure, assuming that the wiper arm was removed?

* * *

Q. In other words, it would be difficult to get a wire or auxiliary tool in? A. Yes.

Q. Is this merely because the fabric is fastened to the trough? A. Yes.

* * *

[127] EDWIN S. BOOTH, Sworn

Direct Examination by Mr. Pollock

Q. Will you please state your name and address? A. Edwin S. Booth, 530 Sunset Avenue, Lagrange, Illinois.

* * *

Q. Would you please summarize for the Court's benefit your educational and technical background? A. I graduated from Rose Polytechnic Institute with a Bachelor's Degree in Mechanical Engineering in 1927. I graduated from Georgetown Law School with an LL.B degree in 1933, and I have been practicing patent law since that time.

* * *

[128] A. [Continued.] If I understand the question correctly now, it is what I regard to be the novel subject matter of the Mackie-Duluk patent?

Q. Exactly. [129] A. The novel subject matter of the Mackie-Duluk patent relates primarily to a fabric for use on a convertible automobile top, which is of a special shape and which is provided with a flap extending down into the body below the belt line and permanently secured to the body, and which cooperates with a wiper arm movable with the bow structure to engage the inner surface of the flap as the top is raised and hold it over toward the inner side wall of the body.

XQ. In any of your fabric tops where you have no shingle and where you do not use a shingle, is there any extra thickness of cloth [92] in any area of the belt line of the automobile once the top is installed? A. No.

XQ. Where you use a shingle, where is that located with respect to the belt line? A. The shingle is above the belt line.

XQ. Can you give me an estimate about how far above it is? A. I would say it stays about—finished on the car, about ½ inch above the belt line.

XQ. What is the space between the fabric and the belt line in, for example, a 1953 Pontiac? A. I would say about 3/8 of an inch.

XQ. How long a space is that? Over what length? A. About 12 inches.

[93] XQ. Have you seen fabric tops of original installation, say, 1953 Pontiacs? A. Yes, I have.

XQ. What is the space in that type of car? A. This is when the top is taken off?

XQ. I'm sorry. In connection with the car of original installation, say, a 1953 Pontiac, using a cushion, what type of space is there? A. There is absolutely no space.

XQ. Could you say that these last few questions that I asked you with respect to a comparison of your fabric top and a comparison of the original installation holds true for the General Motors line of 1950 to 1953, inclusive? A. Yes.

XQ. How about 1954 Chevrolets and Pontiacs? A. 1954 Chevrolets and Pontiacs? General Motors changed their construction to a shingle and did away with the wiper arm and installed a permanent plate.

XQ. I would rather get into that on direct. With respect to the Ford Motor Company cars of 1952-1954 and 1955 Lincoln, would you say that your statements that you just made are also correct? A. The 1952 and 1953 Fords

[131] Q. Have you ever had occasion to analyze the claims of the Mackie-Duluk patent, in the light of the structure which you say you saw? A. Yes, I have.

[133] Q. Would you give the Court a detailed discussion of the results of your analysis, please? A. Well, turning first to Claim 3 of the patent, I have broken this down into an introductory portion, which simply says: "In a convertible automobile body, the combination of"—and which sets the background for the claimed structure. The first actual element defined is "a lower metal body structure or tonneau having a body panel," which is colored brown.

The second element is "a folding bow structure supported by the tonneau," which is colored blue.

The third element says "having flexible top material supported by the bows" which I have colored a sort of a light green.

Those three elements, I might say, are basic elements of every convertible automobile structure and do not characterize the novelty of the Mackie-Duluk patent other than to provide the environment and setting for it.

[134] The drawing cannot show operation of the bow, but in the actual automobile, which I saw, when the top was raised the bow did swing up along the inside of the downwardly extending flap and pressed it toward the tonneau or top belt line of the vehicle's body, tending to produce an effective [135] seal at that point.

Q. So when you say that the top material was pressed outwardly by the wiping arm, did you actually observe that? A. It appeared to me that the wiping arm did press the material outwardly as it wiped up over it.

did have a considerable space between the wiper arm and body; and the 1954 Ford, the space was much closer together.

[94] XQ. In the 1952 Ford, for example, and 1951 General Motors, was the tightness between the wiper arm and the body line merely one of a closure or one of substantial grip? A. This is on original manufacture?

XQ. Yes. A. It was one of substantial grip.

XQ. Would you say then that there was a clamping action? A. Clamping action, yes.

XQ. You examined the Mackie patent just a few minutes ago. I think you looked at Figure 2. Will you open it up to Figure 2? If you will look at the in-leaning fin called No. 27, you will notice it is somewhat deformed.

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[95] XQ. Would you read to the Court in Column 3 of the Mackie patent, beginning with Line 10?

A. "In the construction shown in Fig. 1, the toggle arms fold up to the near straight line position and the wiping arm 10, with its struck out boss 11, wipes against the top material 28, pressing this firmly against the in-leaning fin of the weather strip, pressing that fin outwardly as shown in both Figures 2 and 8. This firmly holds"—

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[96] XQ. I would like to call your attention to the depositions which you gave on October 4, 1956,

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tell me if you recall whether these are correct. This is page 84 on the recross examination:

"Q. [By Mr. Wolf] There was one statement that was made to you and you more or less assented, at the end of the redirect examination, that in effect, at least I understood it to be, whether or not tops are made with shingles or cushions or without shingles

Q. Did this top fabric have a cushion on it? A. No.

• • •

[137] Q. You have discussed Claims 3, 4, 5, 8 and 9 of the Mackie-Duluk patent. Is that correct? A. That is correct.

Q. Do any of these claims recite the provision of a cushion or a weather strip or a sealing strip or anything of similar nature? A. No, they do not.

The Court: Do any of them fail to mention that there will be either a water-tight seal or a weather seal?

The Witness: Claim 4 simply says at the end of the claim, in raising the top to seal the joint of the top material with the adjoining top of the tonneau.

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[138] The Witness: When your Honor says that word "seal" has a definite meaning, I am not sure that I fully understand. The term "seal" as I gather from the patent, in the light of the subject matter of the patent, means that the flap material is close enough to the side wall of the body structure to prevent access by a human hand to get into the car and to prevent access of a sufficient quantity of water to flood the interior of the car. In other words, to limit the quantity of water which can enter the car to an amount that the rain gutter can carry away.

The Court: That is the water seal or weather seal?

The Witness: Yes, that's correct.

The Court: You say "seal" also means to keep the hand out?

The Witness: Yes.

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[139] The Court: Are you qualified to say whether, without this, one could reach into a car and unlatch the door?

The Witness: Not as a technical expert, your Honor.

The Court: All right. As a patent expert would it

or cushions is immaterial. Would you say that is accurate?

Mr. Pollock: I think the background of the question was, if we were driving in a rainstorm, the functioning of the top under those circumstances.

Q. Did you say it would or it would not? A. I would say with the cushion there would be less tendency of water getting into the trough, but the fact that it goes into the trough and goes out satisfies us.

Q. In other words, in answering that you were talking [97] about net results? A. Net results, yes." Is that statement correct? A. Yes, it is.

• • • •

XQ. Would you consider the specific method of effecting the closure or treating the area between the fabric and body line the same when you use your 134 top on a 1952 Ford as compared with an original 1952 Ford? A. No, it is not the same.

XQ. What is the difference? A. On the original, the 1952 Ford, the cushion was installed by the factory to cause a weather-tight seal and our method of installation or the way we make tops is not to cause a weather-tight seal but let it go in, the water go in and go out the trough.

XQ. How much space is there between the fabric and the body line when you use Aro? A. What year?

XQ. 1952. A. I would say enough to get your finger down through. Between 3/8 and 1/2 inch.

[98] XQ. I would like to clarify certain apparent misunderstandings of structure. Could you clearly describe the 1950 to 1953 General Motors cars with respect to the convertible top assembly? A. Yes. The 1950 to 1953 General Motors cars are constructed of a top consisting of a cushion located at the body line with a pressure bar called the wiper arm pressing against the fabric to cause

be your experience there was a certain amount of seller's talk contained in patents?

The Witness: Yes, your Honor.

Q. What is your understanding of the purpose of the trough? A. The trough is provided for the purpose of catching any water which enters the body of the car between the fabric and the upper belt line of the car. The flap, incidentally, extending from that point and being connected to the trough, will direct that water into the trough so that it can't get out into parts of the car where it is not desired to have water.

Q. Isn't the trough a meaningless element if a cushion is provided? A. No, because even with the cushion, according to the patent and according to the statements in the file history, it is quite possible that water would seep between or through that joint, and if it were not carried away it might damage some part of the car.

* * * * *

[141] The Court: Your suggestion is if there was no wiper arm and the flap just merely hung down inside, a great deal more water would get in?

The Witness: If the flap hung loosely, your Honor?

The Court: And was not extended, but just cut off.

The Witness: Oh. Well, that would be my opinion, your Honor, and also there would be nothing to guide whatever water did enter into a place where it could be conveyed away.

The Court: In other words, my old car which had snaps, if I left the snaps unsnapped and the top got inside of the tonneau, that is, the shirt tail, so to speak, was just long enough to get inside the tonneau and it rained hard and the wind blew, a good deal of water would get in?

The Witness: I would think so.

The Court: I should so find.

* * *

a water-tight seal, and this cushion is located half above the tonneau and half below the tonneau if installed correctly, causing the weather-tight seal.

XQ. In that particular construction, would you estimate the distance between the wiper arm and the body of the car? A. I would say about 3/8 to 1/2 inch.

XQ. Would you estimate the approximate thickness of the cushion itself? A. About 1/2 inch.

XQ. How long was this cushion? A. It varies on certain models. 224, which is 1950 to 1952 Chevrolet, Pontiac, and Olds 88, would probably be about 14 or 15 inches long. On a 1953 Oldsmobile it might be 10 inches long and on a 1953 Chevy it might be 11 or 12 inches long.

XQ. Where does the forward end of the cushion terminate in these constructions? A. At the—just clearing the pillar post at the forward end.

XQ. How about the rear end of these cushions; where does that terminate? A. That terminates at the belt line where the fabric starts to [99] tack on the outside.

XQ. Is there any significant space between the body line and the fabric beyond the ends of the cushion in these constructions? A. No. That is where the fabric comes from the inside of the car and goes to the outside of the car. Sort of a hook affair.

XQ. Did General Motors, in any of these original constructions, use fabric without a cushion, to your knowledge?

A. Yes. In 1954.

XQ. I am talking about 1953. A. No.

XQ. And 1950, 1951 and 1952? A. That's right. 1950, 1951, 1952, 1953, on all cars and some—no. On all cars, 1950 to 1953.

* * *

XQ. Will you please describe the construction of those in 1954? A. The construction of the 1954 Chevrolet and Pontiac, they utilized—excuse me, I'm sorry, I made a

[142] A. [Continued] The second advantage is that the device weather seals as well as fastens the material to the top of the tonneau in a way that is not afforded by previous structures. That advantage, as I read the patent, is derived primarily, if not entirely, from the shape of this fabric.

The fabric, when the top is raised, stretches fairly close to the top of the tonneau of the car and if it does not actually make a water-tight seal, it limits the space at that point to a small enough space so that an excessive quantity of water will not enter the car.

[143] Furthermore, it directs what water does enter the car into the rain trough or gutter where it is carried away without damaging anything.

The third advantage stated is that the material is locked in place so that it is not possible to release it to reach into the interior of the car to unlatch the doors. That we have discussed previously as being afforded by the fabric.

Q. The analysis you have given up to this point related to a 1954 Ford with a top 134 thereon; is that correct? A. Well, we were discussing that and the patent itself.

* * *

[146] *Cross-examination by Mr. Wolf*

XQ. Mr. Booth, how much time have you spent in examining actual Ford and General Motors cars in connection with this particular case? A. Not a great deal, not more than a couple of hours, probably.

XQ. How many cars have you looked at in connection with your examination? A. Probably not more than three.

XQ. Can you tell us what cars you have looked at? A. Well, the 1954 Ford, equipped with an Aro Top. I have probably spent more time examining it than any others. I have examined a 1954 Chevrolet, the one I mentioned awhile

mistake. The 1954 [100] did not use a wiper arm, Chevrolet, Pontiac.

XQ. What did the 1954 Pontiac and Chevrolet use? A. They used a stationary bar approximately 7 or 8 inches long with about 5 or 6 screws, and it screwed to the body in a stationary position.

XQ. Well, did it screw to the body—where did it screw to the body? A. Below the belt line, between the top and the tonneau.

XQ. There was a trough on this particular construction? A. Yes.

XQ. There were folding bows on this particular construction? A. Yes.

XQ. And the fabric top had a portion extending down into the car? A. Yes, it did.

XQ. This pressure bar or heel plate extended across the fabric above the top? A. That's right.

XQ. And screwed directly to the wall of the car? A. Yes, it did.

XQ. What was the difference between the fabric top made by General Motors for the 1953 and 1954 Pontiac as compared with the 1954 Pontiac—Pontiac and Chevrolet, both? A. The 1954, the cushion was dropped and substituted by a shingle.

[101] XQ. In 1954? A. In 1954.

XQ. Now, other than that were there any significant differences? A. No, sir. The tops are interchangeable in 1953 and 1954.

XQ. Isn't it true that in 1954 there was no construction which used a wiping arm pressing the fabric against the body line? A. That is true.

XQ. In respect to the 1950 to 1953 General Motors cars of all designs and the 1954 Chevrolet and Pontiac, is it not true that the folding bow mechanism was substantially the same as it had been for many years? A. Yes.

ago, and I have also examined a 19—I believe it was a 1953 Oldsmobile.

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XQ. So the only top you have ever seen, actually identified, is a Ford automobile having what you consider to be an Aro top? A. That's correct.

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[147] XQ. You took his word for the fact it was an Aro top, that it came in the box he indicated to you? A. That's right.

XQ. You would have no way of knowing exactly what the usual spacing is other than from that one examination? A. That's right.

XQ. I see. On this particular car you saw, would you please describe the fabric top itself? I will restrict my examination at the moment at least to the 1954 Ford that you saw. A. Well, the fabric was, as far as I could determine, similar to this fabric we have here in court, which is an exhibit.

Mr. Pollock: Plaintiff's Exhibit 11.

The Witness: Plaintiff's Exhibit 11.

A. [continuing] The part to which I paid most attention was the rear quarter. There was a flap which apparently was identical or extremely similar to the flap on this fabric, Exhibit 11, which extended down inside of the car, below the belt line, and between the body of the car and a wiper arm attached to the linkage. That fabric was secured by several screws to a rain trough mounted on the inside of the car below the belt line.

XQ. This particular fabric to which you refer, do you recall whether it was a single thickness of fabric in this flap? A. The flap itself?

XQ. Yes. A. No, I can't say that I do.

[148] XQ. Do you recall whether or not there was a cushion on it? A. There was no cushion.

XQ. Has it been the same since? A. Yes.

XQ. Could you describe the variations of the body lines of these cars from year to year? A. The body lines? You mean the way it is fashioned?

XQ. The shape of the tonneaus in this area with which we are concerned. A. They are basically the same.

• • •

[102] A. I am not a linkage expert. As far as I am concerned, the folding mechanisms are pretty uniform in all convertibles and they have been for years, but the way it is installed in the lower quarter section, on the trough, there are these very, very sharp prongs and the flap that goes down inside is pressed over these prongs, and the prongs pierce the fabric and it is held in position. Then the prongs are bent down in order to form a locking device.

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[103] XQ. Well, in these Ford Motor products did all of them have wiper arms? A. Yes.

XQ. What kind of fabric tops did the original cars have? A. I don't know what you mean by fabric.

XQ. I'm sorry. Did the fabric tops of original installation use cushions? A. Yes.

XQ. Which years and which models? A. The 1952 and 1953 Ford, Mercury, and Lincoln; 1953, 1954, and 1955 Lincoln used cushions at the lower quarter section tonneau, and the 1954 Ford and Mercury, the cushioning part was left out but the pattern of the top itself at that section was not changed.

XQ. Well, isn't it true that there was a folded over portion in that area in the original installation? A. Yes.

XQ. How many thicknesses of material were there in the 1954 cars? A. 1954?

XQ. In the area of the belt line? A. I would say four.

XQ. Isn't it true that the only difference then was in

XQ. Was there a flap or shingle? A shingle? A. No, there was not.

XQ. From your examination of the particular top that you saw, would you conclude that no effort was made to provide in this particular top a seal in the sense of closing the distance between the wiper arm and the body line? A. Well, I saw no evidence of any effort to obtain a seal.

XQ. Now you say you have never seen a cushion in the sense we have been talking about it until you came in here today, is that correct? A. In the top I could identify as an Aro top, that is correct.

XQ. Have you ever seen what we have been terming here a cushion? A. Yes.

XQ. Where have you seen it? A. In the 1954 Chevrolet I mentioned and in the Oldsmobile.

XQ. Let us consider the Chevrolet momentarily. Did you take a very close look at the inside of the Chevrolet? A. Well, I got into the car and looked over the back seat and examined everything that I could see, and felt around a little bit.

XQ. Are you sure it was a 1954 Chevrolet? A. Well, that is my present recollection, Mr. Wolf.

XQ. Is it possible it could have been a 1953 Chevrolet? [149] A. It is possible but I don't think it was.

The Court: How would you know?

The Witness: I relied primarily on the owner of the car, your Honor. My recollection is that he told me it was a 1954.

XQ. Other than a hearsay statement, you do not know for sure? A. Not other than that.

XQ. I see. Let us consider—what was the other type of car? A. Oldsmobile.

XQ. 1953 Oldsmobile? A. I think it was a 1953. It could have been a 1952.

the 1954 original installation fabric tops, they took out the resilient cushion from its pocket? A. Yes.

[104] XQ. What would you estimate the space to be in those cars you have seen of 1952 and, say, 1953 Fords between the wiper arm and the body? A. About 3/8ths of an inch.

XQ. How thick would you estimate the fabric that you use in your top to be in the area of the belt line between the wiper arm and the body, the belt line when it is installed in the Ford? A. About 1/8th.

XQ. Is this distance always that small or does it get larger or what? A. It varies. It goes anywhere from a half inch to 3/8ths of an inch.

XQ. Is there any impediment in the flow of the water down the fabric when you have your fabric on these cars? A. No. We have considerable space, and the water goes through freely.

XQ. I am talking about an impediment between the body line and the fabric of the car at its closest point. A. There isn't any.

XQ. Is there any impediment in the flow of the water which happens to strike below a shingle in those models in which you use a shingle when it flows downwardly between the body of the car and the fabric? A. No.

* * *

[107] XQ. You then indicate that if there is any overflow over the sides of the trough, if the trough isn't large enough to accommodate the flow of the water, this overflow will flow into the fender well or the recess well and hence out of the car and will cause no damage whatsoever? A. Yes.

XQ. Is that right? A. Yes.

XQ. Is that what you meant before when you said that the net effect is the same? A. Yes.

XQ. Did you make any examination of any of the cars as to the [150] specific distance between the wiper arm and the body of the car? A. No. Well, yes.

XQ. In the sense of actually removing the fabric to see what the space was? A. No.

A. Well, on the Ford, I tried to feel with my fingers, and I also tried to insert a paper matchbox between the fabric and the side wall.

XQ. That is on the Ford? A. Yes. On one side I could not get the tips of my fingers down beyond where the wiper arm, the top of the wiper arm is. I could get a match, a paper matchbox into that space. On the other side, I could not get the paper matchbox in.

XQ. In the GM car, the Oldsmob., did you notice the spacing there? A. No. I did not.

XQ. It was wide enough so that it accommodates a cushion? A. There was a cushion in there.

[151] XQ. Are you aware of the fact that there is a difference of construction between the 1954 Ford and the 1953 Ford and the 1952 Ford? A. So far as the top is concerned?

XQ. So far as the spacing between the wiper arm and the body line is concerned. A. Well, I have been told that the 1952 and 1953 Fords used a cushion in the fabric which was omitted in the fabric for the 1954 Ford.

XQ. Would you say it would be impractical or impossible to put a cushion on to the car, the Ford car that you had examined? A. It would have been a pretty thin cushion.

XQ. I would like to go back to the patent, the file wrapper. I refer you to certain drawings that appear

XQ. As far as weatherproofing the car or making it watertight? A. Yes.

[108] *Redirect Examination by Mr. Pollock*

Mr. Pollock: That is my understanding, your Honor.

Q. Mr. Shapiro, I would like to invite your attention to some prior testimony which you gave in your deposition of October 4, 1956. I first invite your attention to Page 43 of that deposition. Would you read the question by Mr. Wolf that is underlined, and the answer?

"Q. Mr. Shapiro, will you please name those cars of original manufacture which use wiper arms and cushion? A. 1952, 1953, and 1954 Ford and Mercury. 1952 to 1955, inclusive, Lincoln. 1950 to 1953 all General Motors, and including the 1954 Chevrolet and Pontiac."

Q. That is, as I understand it, you testified then the 1954 Chevrolet and Pontiac did have a wiper arm and cushion? A. Yes. That was in 1946 when the deposition was taken.

Q. 1956. A. 1956, I mean. Excuse me. But since then we have looked into it a little further, and every 1954 Chevrolet and Pontiac that we have found so far to my knowledge has had the permanent [109] bar there, without a wiper arm.

Q. I invite your attention to Page 49 of this deposition. Would you start with this question and read the answer?

"Q. Now, will you please summarize those cars which in their original manufacture used wiper arms of the general type shown in the patent owned by the plaintiff and subject to the present civil action? A. 1952, 1953 and 1954 Ford and Mercury, and including 1955 Mercury. Is that plain enough?"

in the file wrapper of this particular case. There are some drawings in there. Will you please open it to the file wrapper, which shows these drawings?

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[152] Mr. Wolf: I refer you to Page 43.

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XQ. Can you identify it? A. Well, this is a drawing filed with one of the amendments purporting to show a construction then being made by General Motors Corporation.

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XQ. For identification, could you mark on the exhibit Figure 1, as the drawing 1 on the left, showing the side view of the car? A. Yes.

XQ. Could you mark the other one as Figure 2? A. Yes.

XQ. And could you also mark the section lines as 2-2? A. Yes.

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[153] XQ. Figure 2 corresponds in substance, does it not, to Figure 2 of the Mackie-Duluk patent? Am I correct in making that assumption? A. It is a section of the same type taken in approximately the same place.

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[156] XQ. Examining that particular construction would you conclude that it is in substance identical with the Mackie and Duluk patent construction as shown in Figure 2? A. Well, it is not identical in that Figure 2 of the patent does not show a cushion in the fabric, as is shown in the drawing.

XQ. Is Figure 2 shown in place of a cushion? A. I don't know. Well, Figure 2 shows a sealing strip 27.

XQ. Does that perform the same function as the cushion? A. I presume so, yes.

XQ. Would you conclude that the cushion and the sealing strip are in fact equivalents? A. Yes.

Q. That should be "and including 1955 Lincoln." I believe you misread it. "and including 1955 Lincoln." A. Yes.

"Is that plain enough?

Q. 1952 to 1954 Ford and Mercury, and 1955 Lincoln? A. Yes. This is just the wiper arm?

Q. That is right. A. 1950 to 1953, inclusive, General Motors and including 1954 Chevrolet and Pontiac."

[110] Q. I invite your attention to Page 52 of this deposition. I invite your attention to this question and answer. Would you read the question and answer?

"Q. Now, the tops you made for the 1954 Pontiac [111] with the wiper arm were what model? A. No. 232."

Q. So you said at that point in your deposition that you made a 232 for the 1954 Pontiac with a wiper arm? A. Yes, but—

Q. I ask you to read the next question and answer. A. "Q. With Model 232 or the top which you made for the 1954 Pontiac with wiper arm, were these Pontiacs which had the stationary plate? A. Exactly, identical."

Q. And down here, this question and answer?

"Q. Have you sold some of these Model 232 for jobbers? Do you know whether or not they were being installed on a Pontiac with a stationary plate or a wiping arm? A. No.

Q. Would it make any difference to you? A. No."

Q. Apparently in 1954—excuse me, at least in 1956 you thought that there were 1954 Pontiacs with wiper arms? A. Yes. In other words, when we get an order in the mail to ship out a part No. 232 we don't know whether it is going on a 1953 or a 1954.

XQ. Equivalent in the sense that they provide a weather-tight or watertight seal? A. They at least attempt to.

XQ. In the Mackie and Duluk patent is it not true they talk about deforming the in-leaning fin 27 or this rubber weather strip to obtain the seal? [157] A. That's correct.

XQ. Does this drawing of the General Motors construction disclose the same type of deforming? A. Well, the cushion is shown thicker above the belt line than below it, which would indicate that it has been squeezed below the belt line.

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XQ. Would you say this is a fair representation of the construction you saw in the Oldsmobile? [158] A. Yes, as near as I can tell it is.

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XQ. Would you have any knowledge as to how much space would be required for the fabric, such as is shown in 134, the top of the defendant's construction, between the wiper arm and the body line? A. I could only estimate by looking at the fabric.

[159] XQ. How would you estimate it, from looking at the fabric? A. I would say not over an eighth of an inch, or possibly less.

• • •

XQ. Would you please enumerate what you would consider to be the function of the wiper arm in this particular patent disclosure? A. The function of the wiper arm, according to the Mackie-Duluk [160] patent, is to press the fabric over toward the inside belt line of the car to effect a seal.

XQ. What is the patent saying about the positioning of the fabric toward the body line? A. Do you want me to read the part where it talks about that?

XQ. Would you, please? A. In column 3 of the patent, starting in line 7, it says:

Q. Well, of course, all these questions were asking about 1954 Pontiacs. [112] A. We wouldn't know. We use the same top for both.

Q. This stationary plate which you have been speaking about, did it have the same function as the wiper arm, as the movable wiper arm? A. No.

Q. What was the function of the stationary plate? A. I don't know. All it did was press the fabric in—in this deposition it says at the belt line. It is well below the belt line. It is in between the trough and the belt line.

Q. The stationary plate actually pressed the fabric in? A. Yes.

Q. What did the wiper arm do? A. The wiper arm pressed the fabric against the tonneau.

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Q. The stationary plate pressed the fabric up against the belt line? [113] A. I think so.

Q. You so testified previously. Did you see that? A. Well, since that testimony I have had an opportunity to examine these cars a little more closely.

Q. I believe you said that without the cushion there was enough of a gap in your 134 to get your fingers down through?

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A. Yes. No. Get my fingers in—what part of my fingers?

Q. What do you mean by "your fingers" and "down through"? A. I don't mean my hand. I mean my finger tips. When I said the space was 3/8ths of an inch to a half inch, that is about the width of my fingers.

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[114] Q. So that with the wiper arm in place this has no cushion in it here? A. That's right.

Q. Only the tip of one finger, and with the wiper arm removed you get your whole hand in, is that correct? A. Yes.

"When the top is raised by raising the main bow 1 and the other connected bows (not shown) the material is stretched as shown in Figs. 2 and 8. In the construction shown in Fig. 1, the toggle arms fold up to the near straight line position and the wiping arm 10, with its struck out boss 11, wipes against the top material 28, pressing this firmly against the in-leaning fin of the weather strip, pressing that fin outwardly as shown in both Figs. 2 and 8."

XQ. Isn't the function, then, of the wiper arm to press the fabric against the body line, into contact with it? A. He described it here, where that fin is employed the arm is intended to press the fabric against the fin and to deform the fin.

XQ. I didn't ask you to read any specific part of the patent, I just asked you to refer to it. You picked out this portion which said the wiper arm presses the fabric against the body of the [161] car. Do you know of any support for your contentions you have been making, or that have been made, that the object of the wiper arm is to press the fabric close to the body line? A. In the file history, when the claims were amended to omit limitation to a cushion or a sealing element, it was pointed out in the discussion at that point that the sealing element or cushion could be omitted, that its purpose was to compensate—

XQ. I am not talking about cushion or sealing element, I am talking about the function of the wiper arm.

A. About the only explanation of the functioning of the wiper arm in the specification itself is the statement I just read to you.

XQ. Let us turn to the file history of the case. Would you please indicate to me what support you can find in

[117] Q. Now, I noted in your cross-examination that you said that the gap was such that all the water that ran down the fabric could get into the trough; is that correct? A. On the Fords, yes.

Q. When you are actually out in a rainstorm, does all the water that hits the top run right down the fabric? A. Driving or standing still?

Q. Driving along. A. No.

Q. Some of the water bounces off? A. Bounces off or goes to the rear.

[118] Q. I invite your attention to your deposition of October 4, 1956, at page 83. Would you read this question and answer, please? A. [Reading]:

"Q. I see. Now, you were speaking of how the various tops would operate in a driving rainstorm. As a matter of fact, in practice, if one of your 134 tops, without any cushion or flap, were placed on a car and you were driving in a rainstorm, driving the car along, some rain would hit the top material and bounce off? A. What top material?

Q. Rear quarter? A. I doubt it. Yes, it would run off, I imagine."

Q. Go ahead. A. [Reading]:

"Q. And some of the rain would also go into the possible gaps between the material and the belt line of the car? A. Not very probable. It would be more so if it [119] were standing still."

Q. Have you testified there when you are driving along with the top fabric with no cushion and no flap, have you testified it would be not very probable for water to get in that gap? A. Not as much water.

The Court: The General Motors original top, you say in 1953 that the cushion was part of the design?

The Witness: Yes, your Honor.

The Court: Now, in Exhibit No. 7, if I remember correctly, your brochure does not advertise your replacement was the same as the design of the original top?

[120] The Witness: Yes, your Honor.

The Court: And did you so advertise when you omitted the cushion?

The Witness: No, your Honor.

The Court: You no longer so advertised?

The Witness: No. We advertised that before we were notified of any infringement. We had no idea this was an infringed article.

The Court: In order to avoid the possibility of infringement you would omit the cushion and no longer advertise your tops followed the original design?

The Witness: I think at that time we changed our whole catalog sheet and didn't make any mention of what was on that original one.

The Court: All right.

Recross Examination by Mr. Wolf

XQ. I would like to refer to these exhibits 15-A and B and 16-A and B. I hand you Exhibit 15-B. Would you tell me whether or not that was as far as you could push your hand at that time? A. I believe it was.

XQ. Do you recall whether or not you actually were able to touch the screws or any other objects which secured the fabric down below the body line? A. I possibly could touch the prongs or where the fabric met the gutter, but in doing so, so much pressure would have to be exerted [121] it might tear the fabric from the channel—gutter.

The Court: Could you reach the handle of the door?

The Witness: No.

The Court: Could you reach the lock of the handle of the door?

The Witness: No, your Honor. You can't reach inside the car at all. It is only between the cloth and the outer shell.

The Court: What is it that prevents your doing that, the wiper arm or the fact that the flap extends down?

The Witness: On this photograph, your Honor, the wiper arm is removed for demonstration purposes.

The Court: Then the answer to my question which you are implying is that it is the downward extension of the flap which prevents your getting into the car?

The Witness: Yes, your Honor.

* * *

[122] XQ. How would a trim man normally remove the fabric from the trough when he is going to replace it? A. He would get in the back seat, reach down, unscrew the recess well, and then pull the bottom flap toward him, and that in turn would pull the prongs out in a straight position and the material would slip off.

XQ. What tools would you normally use? A. Just a screwdriver for the recess well.

* * *

[124] XQ. And you say this cover material is also secured in this area? A. That's right.

XQ. And it is secured to the back rest, the bracket and the back rest? A. The back rest bracket.

XQ. How is it secured? A. Well, in some models screwed, and others it is cemented.

XQ. To gain access to an area in the back of the front seat you would have to not only get through the flap in the trough area but also through this cover material on the inside; is that correct? A. Yes. If you are able to reach inside of 134 and release the fabric below the

up against the body line? A. Yes, that is what it disclosed.

XQ. Isn't this a clamping action? A. Well, I think we are fighting over words. I don't mean to do that with you.

The Court: I think he is troubled about, or what I would be troubled about, is your suggestion there was a seal, even though there was 3/8 of an inch space between the two, because, within the meaning of the specifications the word "seal" is sufficient if it covers the fact that you can't get your hand in. I think that is what counsel pretty well talked you out of at the moment. I would like to do it a little further. Is my bedroom sealed if I have the window open but a screen to keep the mosquitoes out?

[165] The Witness: It is sealed against mosquitoes.

The Court: Would you ever use that word in common parlance?

The Witness: Probably not.

* * *

[166] XQ. Mr. Booth, would you explain just what a file wrapper and content of an application is? A. The file wrapper and content is a copy of all the papers filed in the Patent Office in connection with the application and the prosecution of the application, bringing it up to the point where it results in the issuance of a patent.

XQ. It includes all the contentions and arguments of the patent applicant? [167] A. Yes.

XQ. As well as the reasons for rejection? A. Yes.

* * *

XQ. You would conclude that the original application is in substance the same as that issued, ultimately issued? A. Yes.

[168] XQ. Now would you please turn to page 19 of the file wrapper? A. Yes.

XQ. Would you please identify what portion of the file

wrapper this page constitutes? A. Well, it is essentially the remarks made by the attorney in connection with an amendment filed before there had been any action on the application by the Patent Office.

XQ. Would you please read the remarks if there are only two sentences, the first two sentences? A. [Reading]:

"After the filing of this application it became apparent that some of the claims of the application as filed were not of the proper breadth. The sealing strip may be alternatively upon the top of the tonneau or on the folding top material."

XQ. From your examination of this patent and the file history, would you agree with the second sentence? A. Yes.

* * *

[172] XQ. I am trying to determine how broad these claims are to which he refers. He says that they are entitled to broad claims that will cover all forms of this automatic sealing device. What is the scope of the broad claims he is referring to in connection with this automatic sealing device? A. Well, the claims then in the application all called for some kind of a sealing means, whether on the fabric or on the body of the car itself.

[173] XQ. That was an actual closure, is that correct, barring of course incidental seepage perhaps? A. Yes, a flexible sealing element of some sort.

XQ. Would you agree with the statement that he makes, and I will quote it, "here one has an automatic seal which is a complete and unfailing seal under all conditions"? A. Well, that certainly is what he was seeking. So far as the patent is concerned, I would agree with it.

* * *

XQ. Well, he was including that in his claims as one of the elements of his claims? A. Yes.

* * *

[193] XQ. Wouldn't you agree that the whole substance

of this file wrapper is directed towards obtaining a patent with a seal? A. Yes.

XQ. All right. Wouldn't you further agree that they accomplished the seal by pressing the fabric right up against the body by the use of a wiper arm? A. Well, as I interpret the seal, Mr. Wolf, you could have an effective seal for the purpose of the invention without pressing the fabric tightly against the belt rail of the body.

XQ. Did you ever see any language in the file history of this case or in the patent which says that you don't have to press it right up against it, which indicates there can be a space? A. There is language in some of the claims which doesn't require that it be pressed right up against the body.

XQ. That is an interpretation of the claims. I am talking about specific language where they say that it doesn't have to be pressed up against the fabric, doesn't have to be pressed up against the body? A. You are limiting this to the specification itself and to the attorney's remarks?

[194] XQ. And the Patent Office remarks, too, for that matter. A. No. I see no such language.

XQ. In other words, your conclusion that it does not have to be pressed right up against the fabric is one based solely upon your interpretation of the claims? A. That is correct.

XQ. In the absence of reference to the file wrapper or to the patent specification itself? A. Well, the claims of course have to be interpreted in the light of the patent specification.

XQ. You say you find no support for that, for what you are contending, other than the claims themselves? A. I said I found no statement to that effect.

XQ. The statement says, "The seal is actually accomplished by the clamping of the top material 20." Would you agree with that statement? A. Yes.

[195] XQ. Do you know of any other way this fabric could be clamped in the manner to which they refer in that sentence other than between the fabric—other than between the wiper arm and the body of the car? A. Not in the structure we are discussing.

XQ. It is true the patent only teaches the use of the body line and it is true the patent only describes the use of a wiper arm on the body of the car to provide a clamping means? A. Yes.

XQ. Which claims do you consider to be the broadest? A. Well, it is hard to say which precisely is the broadest. I would say Claims 3 and 5 are representative of the broadest claims of the patent.

XQ. Which would you prefer to take for the purpose of examining the scope of the claim? A. Either one.

XQ. 3 is the first. I presume that is satisfactory. Did we not establish that the concept of this invention or this device, the fundamental concept was to provide a clamping or sealing means at the edge of the fabric and the body line? [196] A. Well, to establish a seal at the rear quarter.

XQ. Would you please show me in Claim 3 where this is recited? A. In the last phrase of the claim.

XQ. Would you read it, please? A. "and an arm secured to a bow and operable simultaneously with the bow to engage the inside lower portion of the top material in raising the folding bow structure and produce a weather seal between the top material and the top of the side of the tonneau."

XQ. My understanding was that you had previously testified the idea was to obtain a sealing and the patent and file wrapper speaks of pressing the fabric up against the

body of the car by means of a wiper arm, and it was held there by the wiper arm. Is that right? A. Yes.

XQ. Isn't that clamping it up against the body? A. Yes.

The Court: Isn't the argument going to be "how good [197] a seal"?

* * * *

Mr. Wolf: Your Honor, I will agree with you that there is a substantial question as to how good is the seal, what constitutes a seal, how good a seal there is in these arrangements. It is perfectly clear, of course, we are contending that a seal means pressing the fabric into contact. I think one other thing—

* * * *

[198] XQ: Will you recite the structure which recites the seal once again? A. Well, the statement right at the end of the claim is really an explanatory statement, explaining what happens as a result of operation of the entire structure defined in the previous parts of the claim.

XQ. Isn't it true that the phrase "and produce a weather seal between the top material and the top of the side of the tonneau" is the only portion of this particular arrangement which recites the provision of a seal? A. Yes.

* * *

XQ. Well, in other words, it does define it in terms of what it does? A. I don't interpret that as defining anything. It merely explains what happens. It is explanatory.

XQ. Claim 5, I would presume, recites the same subject matter? [199] A. Claim 5 reads a little differently. Shall I read it?

XQ. Read the portion that you think recites the essence of this invention, the provision of the seal. A. Well, when you say the portion which recites the essence of the invention, I would have to read the entire claim, Mr. Wolf.

XQ. Well, read that portion which is directed towards the obtaining of the seal. Would that still be the whole

claim? A. That is the overall purpose of the invention, as I understand it.

XQ. Do you mean to say then that the tonneau and the fabric and the wiping arm and folding bows are all necessary in this? A. Yes. Without all those parts you don't have a complete operating unit.

XQ. In other words, if you left one of them out it wouldn't work at all? A. That's right.

[202] XQ. You just mentioned that all the elements that are recited in the claim are important. Would you agree that you can't have this seal or the device won't function if you don't have the tonneau, the fabric, and the wiper arm present? A. Yes.

XQ. Have you ever seen a car in which the wiper arm was removed? A. Yes. I saw one last night.

XQ. Would you describe what you saw when the top was raised and lowered? Could you describe what you saw when the top [203] was raised and lowered?

A. Well, when the top was lowered from its raised position it simply folded back into the top well, apparently in the same manner as if the wiper arm had been present. When it was raised, it raised to its upper position. The functioning of the bow structure of the top was apparently the same as when the wiper arm is present, except that on the inside, where the wiper arm was removed, the fabric sagged away from the belt rail of the car.

[205] XQ. You spoke before as to the importance of the fabric itself. You said, I think you used the terms "special shape" and "arrangement formed an important part of this invention or this device; is that correct? A. Yes.

XQ. Could you once again describe what you consider to be the most [206] important part of this particular arrangement of the fabric, itself? A. Well, I would consider the most important part to be the provision of a flap at the rear quarter extending down into the interior of the automobile body and connected at a point below the belt line to the automobile body.

XQ. Will you say that this particular shape could be varied to any extent? A. Do you mean the shape of the extending flap?

XQ. Yes. A. Yes, I would think so.

XQ. Would you say that the length could be longer than that shown in the Mackie patent? A. The length of the flap?

XQ. Yes. A. That it could be?

XQ. Yes, in an embodiment of this particular patent. If you had [207] an arrangement in which the flap was longer. A. I presume that the length of the flap would be designed so that it would be the correct length to fit onto the design of any particular vehicle body and bow structure.

XQ. It could be 6 or 8 inches or 10 inches long? A. Yes.

XQ. Or perhaps 3 or 4 inches long? A. Quite possibly, yes.

XQ. Then the length is really not critical? A. No.

XQ. Is the width critical? A. I would say not.

XQ. The pattern, as I recall, shows two depending portions going straight down on the side edges; is that correct? A. You mean the edges of the flap?

XQ. Yes. A. The front edge appears almost to go straight down. The back edge is cut off at a slant.

XQ. Is that particular portion of any importance? A. You mean the shape of the edges?

XQ. Yes. A. I wouldn't think so.

XQ. You would, then, apparently conclude that the actual shape and area of this flap is really of not any great con-

sequence? A. Well, Mr. Wolf, the shape and area of the flap would have [208] to be designed by the designer or engineer to fit into the particular car for which the top was intended.

XQ. Isn't it important it come down far enough so that you can get the wiper arm on the inside and the body on the outside? A. No. There are other considerations. It has to be of such a length and connected at the proper point so that when the top is folded back you will not tear the top material loose from its fastenings and so that when it is raised, the top material will be stretched relatively taut.

XQ. Are you contending that it is essential that this fabric be secured below the body line? A. Yes.

XQ. You will not be able to effect a seal without securing it below the line: is that right? A. That is my understanding, yes.

[209] XQ. Will you look at Claim 3 of the Mackie patent? Do you have a copy there? Do you see anything in the claim which says that the fabric must be secured below the body line? A. Yes. The element designated by my blue, and the element just above that says that the top material at the rear quarter extends down and is supported by the panel on the inside and below the top of the metal body or tonneau.

XQ. It doesn't say it is secured? Just supported? A. This claim says supported.

XQ. In other words, this claim, the actual fastening of the fabric is not material because it doesn't say fastening, it says supported? A. I read the word "supported" to mean it had to be fastened. It might be interpreted more broadly.

[210] XQ. Well, don't the other claims use the word "fastened"? A. Claim 4 says fastened, Claim 5 says

secured, Claim 6 says—Claim 8, rather, says secured, and Claim 9 says secured.

XQ. You claim that there is no differentiation between supported, secured and fastened, is that correct? A. I hadn't up to this point at least.

XQ. Do you want to reconsider your thought on that at this point? A. I would think Claim 3 would require that the fabric be fastened, Mr. Wolf. It says it is supported by the panel on the inside and below the top of the metal body. If it is not fastened I don't see how it could be supported at that point.

XQ. Isn't it quite conceivable that you can support something on another body, isn't it perfectly obvious, without actually securing it to the body? A. Yes.

XQ. All right. Isn't it quite conceivable that it can be a fabric top, too? A. Yes.

* * *

XQ. I would like to refer now to the trough, which is recited. Do you conclude this is an essential component of the invention?

* * *

[211] XQ. Would you please tell us what the importance of the trough is? A. The importance of the trough, as explained in the patent and file history, is to collect whatever water flows between the fabric and the belt rail of the body and conduct it away, without allowing it to get into portions of the car where it [212] would be detrimental.

XQ. This is a function which is independent of obtaining a seal, is it not? A. Well, I would say it is a part of obtaining the seal.

XQ. Do you mean to say the trough below helps effect the seal above? A. Not necessarily that. But the seal, the purpose of the seal is keeping water out of those parts of the car which might be harmed by water, and it is inevitable that some water will come through between the fabric and

the belt line, even when a cushion is present, and the purpose of the trough is to catch that water and conduct it away in a harmless manner.

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XQ. Isn't the trough working independently then of the seal? The water that seeps through, once it gets through it is drained off by the trough, isn't that correct? A. That's correct.

XQ. It would make no difference if there was no seal up above, the trough would still conduct the water away? Is that not true? A. Well, if there were no seal of any kind up above, if unlimited quantities of water came in, the trough might well overflow.

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[215] XQ. [Continued.] Did you at any time ever see a claim in this application and file wrapper directed to the fabric top alone? A. No.

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Mr. Pollock: With the Court's permission I would first like to read into the record as part of the plaintiff's prima facie case certain portions of the Harold Shapiro deposition of February 20, 1957, which relate to a question of seal.

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[216] Mr. Pollock: The first portion appears at pages 37 and 38 of the deposition.

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Mr. Pollock: The portion in question reads as follows:

"145 Q. When the wiper arm is installed isn't it true by the very fact the top material in your 134 goes down between the belt line and wiper arm there is not much room in there and isn't it true as you raise the top the wiper arm is brushing against the fabric? A. The primary function of the wiper arm is to push against the fabric and make weather-tight seal. It

has nothing to do with the raising and lowering of the top.

146 Q. I am not concerned with the nature of the seal once the top is raised. It is true, of course, is it not, that with no cushion we get an inferior seal with what it would be with the cushion? Isn't that true? A. I would say that you have a better function than with a weather-tight seal. Most 1954 Fords that I have noted had a bunching or a [217] tearing effect on the outside fabric because the seal was too tight, and consequently there was friction between the wiper arm and body line.

147 Q. The top will weather better, maybe last better if the wearing tension is not there? A. And looks better.

148 Q. And maybe look better. But I think it is your contention that you do not get as good a seal, using the word seal for whatever purpose we can use it? A. Weather-tight.

149 Q. Whatever seal you get up here [indicating] is not a water-tight seal? A. That is correct.

150 Q. It is something less than a water-tight seal? A. That is correct."

The second excerpt appears at pages 61-2 of the deposition.

"234 Q. I would like to clarify this sequence. As I recall, you testified that your original replacement top, Part No. '34, had a cushion in it. Is that correct? A. That is correct.

235 Q. When that top was installed on a car in the 1952, 1953 or 1954 Ford model, it gave you a very good seal, water seal, near the belt line? [218] Is that correct? A. That is correct.

236 Q. And then the cushion was dropped and a flap or shingle was substituted for it in your top No. 134? A. That is correct.

237 Q. And that gave you a somewhat poorer water seal? Is that right? A. No.

238 Q. You say that with the cushion you got as good a water seal? With the shingle you got as good a water seal as with the cushion? I am not concerned with the tearing problem. A. No. For our own satisfaction as far as keeping the inside of the car dry, it was as good.

239 Q. How about shedding that water on the outside of the car? A. It did a pretty good job of shedding.

240 Q. Would you say it was as good a job of shedding as with the cushion on it? A. I would say better.

241 Q. You say the shingle did a better job of shedding water off the outside of the car? A. Yes.

242 Q. Than the cushion did? [219] A. Yes.

243 Q. And then you dropped the flap and the cushion and you put nothing in there? A. That is correct.

244 Q. Just relied on the fabric itself? A. That is right.

245 Q. And that did not do as good a job at all of sealing, is that right? A. That is right.

246 Q. But still whatever water got in ran into the trough so you were not really concerned because the inside of the car did not get wet, anyway? A. That is right.

247 Q. So with the cushion and seal gone, it was an interior seal from the point of view of shedding water? A. Yes."

Mr. Wolf: Excuse me. I believe 247 Q, there was an error in the transcript. "Seal gone" should have been "shingle eliminated".

Mr. Pollock: You are quite right. I didn't know whether or not we had agreed on that. In 247 Q, change the words "seal gone" to "shingle eliminated".

the file history of the case that the wiper arm is used to push the fabric close to the body line of the car? A. I was trying to explain, in that amendment, toward the end of the prosecution, the argument was primarily directed to the necessity for the cushion or sealing strip and the attorney pointed out that the reason for the cushion or sealing strip was [162] to compensate for irregularities in the body of the car or in the wiper arm, and that if the wiper arm and body of the car could be made to conform closely enough, the sealing strip could be omitted. In that he recognized that you cannot achieve perfection in manufacture and, as I read that statement, he was saying, in effect, that because you can't achieve perfection in manufacture at reasonable cost, it was desirable to use some element which would yield to take up or compensate for irregularities.

XQ. In so describing this particular portion, isn't it true that the argument was set forth that the intent was still to use the wiper arm to press the fabric into contact with the body line? A. Yes, I think so.

XQ. There is no support for the contention that the fabric was merely to be pushed foward, but still spaced from the body line? A. It never was stated just that way, but I think there is a recognition you cannot achieve perfection.

XQ. We recognize that, but isn't it true that the purpose of the wiper arm is to clamp the fabric against the body line? It may perhaps be imperfect in clamping, but isn't that the purpose of the wiper arm? A. I don't know about the word "clamp". I would say to press against.

XQ. Would you say to seal against? A. Yes.

XQ. Isn't sealing accomplished by clamping, in this instance? [163] A. Clamping, to me, implies a tight gripping.

XQ. Isn't that the intent of this particular patent? A. Not as I understand it.

XQ. Wasn't the whole purpose of this arrangement to provide a clamping arrangement? A. Not clamping in the sense that I understand the word.

XQ. How do you understand the word "clamping"? A. A tight gripping to withstand a mechanical strain. In this case, whatever mechanical strain is present on the fabric is taken by the fastening to the rain trough and the pressing of the fabric to the top is only to exclude weather and assist in excluding unwarranted access.

XQ. Well, pursuing this question of what constitutes a seal somewhat further, isn't the—First, let us ask, is it not true that the intent of this arrangement was to obtain the seal by actually pressing the fabric into contact with the body? A. That was the intent, yes.

XQ. Isn't the purpose of the cushion or the in-lying fin merely to take up for seepage and that sort of—variation in body manufacture? A. When you say seepage, as explained in the file wrapper, it was to compensate for irregularities in the space between the body itself and the wiper arm.

XQ. Which might cause some seepage? A. Which might result in seepage or even leakage.

[164] XQ. Isn't it true in the prosecution of the case the attorneys for the patent applicants urged that the intent here was to obtain a seal and it didn't make any difference whether you used a cushion or an in-lying fin if you got that seal? A. That's correct.

XQ. The whole purpose was to obtain a seal? A. That's right.

XQ. And you could dispose with the cushion or fin if you obtained the seal? A. I would read it that way.

XQ. Isn't it true, therefore, the principal way of obtaining the seal was to press the fabric from the inside right

claims are meant to encompass different degrees of sealing? A. Yes.

[226] Q. Now in the course of your examination concerning the file wrapper, I believe you stated that up to a time at least every claim in the case was concerned with a sealing element or a cushion? A. That is correct.

Q. Were the claims ever amended in this regard? A. Yes.

Q. What is the date of this amendment? [227] A. It is stamped with the United States Patent Office stamp May 28, 1951. A number of the claims were amended in that amendment to eliminate all reference to the sealing strip.

Q. Was the sealing strip as an element of the claims expressly removed from the claims? A. Yes.

[230] EDWIN C. PICKARD, Sworn

Direct Examination by Mr. Pollock

Q. Would you please tell us your name and address? A. My name is Edwin C. Pickard. I live at 16543 Bayless Avenue, Detroit 21, Michigan.

Q. How old are you, Mr. Pickard? A. I am sixty-four years old.

Q. Are you employed at the present time? A. No, I am not.

Q. Are you retired? A. I am retired, as of July 31, 1957.

Q. What did you do before you retired? A. I worked at the Ford Motor Company.

Q. In what capacity? A. I was chief engineer of the Ford Motor Company, of the Trim Engineering Section.

Q. In what capacity what were your duties? A. My duties were that of head of the Trim Engineering Section of the Body Engineering Department, and as such I had supervision of all the interior trim for all products that

Ford Motor produces, Ford cars, Ford trucks, Mercury, Lincoln, and Continental and the new Edsel.

* * *

[231] Q. As chief of the Trim Engineering did you have any people working under you? A. Yes. I had approximately 125 people working for me.

Q. How long were you with the Ford Motor Company? A. 9½ years.

Q. Had you prior to that time done any other work in the automobile field? A. Yes. I had been in the automobile field since 1910.

Q. Would you summarize for the Court's benefit what companies you have worked with over that period of time and how long you were with them? [232] A. I started in the trim business in 1909 with the Pontiac Buggy Company of Pontiac, Michigan. In 1910 I went to work for the C. V. Taylor Company in Pontiac, working on automobile tops. In 1951 I went to work in Detroit for the American Auto and Trimming Company and there I was supervisor. In 1921 I had a trim shop of my own in connection with a paint section. In 1922 I went to work for Hub Motor Company as trim engineer and when the Murray Corporation took over the building of bodies in 1925 I transferred to the Murray Corporation. In 1928 I went with the Edward G. Budd Company as trim engineer. In 1930 I went to the Hudson Motor Car Company, working for the factory manager as special assignment for him. In 1934 I went to work for the Packard Motor Car Company as chief trim engineer on their new 120 car that they were bringing out. In 1945 I went to the Chevrolet Light Car Division which was a new division established to develop and bring out that small Chevrolet car which they never did build. In 1948 I went to the Ford Motor Company as chief trim engineer and was there until I retired.

Q. Are you a member of any engineering society? A. I

am a member of three engineering societies, the Society of Automotive Engineers, a member of the Engineering Society of Detroit, and I am a member of the American Society of Body Engineers.

[233] Q. Are you familiar with what General Motors was doing in the convertible automobile field during your period of employment with them? A. Yes, I was.

Q. Are you familiar with what they were doing in the convertible automobile field prior to your period of employment? A. Yes.

Q. Are you familiar with what General Motors was doing in the convertible top and convertible automobile field after you left their employ? A. Yes, I was.

Q. You say you also worked for the Ford Motor Company? A. Yes, sir.

Q. Are you familiar with what that company was doing in the convertible top field during your period of employment with [234] them? A. Yes, I am.

Q. Are you familiar with what they were doing before and after you were in their employ? A. Yes, sir.

Q. Mr. Picard, you have here available an automobile for demonstration? A. Yes, sir.

[235] Q. What model automobile is this? A. It is a 1954 Ford convertible.

Q. Do you know who manufactured that top fabric?

A. The Aro Company manufactured it.

Q. Do you know the part number for the fabric? A. Part No. 134.

Q. How close to the sides of the car did these wiper arms push the fabric?

. . . .

[236] A. On the right-hand side the wiper arms held the material approximately against the quarter panel. On the left-hand side the wiper arms were approximately an eighth of an inch away.

Q. Was this eighth of an inch gap, if I may use the term, all along the side of the car? A. No, it was particularly at the front and reduced as you got to the rear corner.

Q. Did you consider this a defect when you saw the car? A. For production purposes we would want the gap to be less than that.

Q. Did you attempt to do anything to the wiper arm on the side of the car where we had the eighth inch gap? A. Yes, I did.

Q. What did you do? A. I bent the wiper arm over.

Q. Was this a major job? A. No.

Q. How long did it take you? A. It can be done in a matter of a couple of minutes.

Q. Is that how long it took you? A. Yes.

. . .

[239] AFTERNOON SESSION

1:45 p.m.

City of Boston Parking Facility
Corner of Congress, Milk and
Federal Streets, Boston, Mass.

Mr. Pollock: Will the reporter note the parties have stipulated that this is an Aro top on the car; that the box from which it came is an Aro box. This is an Aro top, Part No. 134, for a 1952, 1953 and 1954 Ford and/or Mercury convertible automobile. Would you read the stipulation back?

[The reporter complies.]

Mr. Pollock: Do you agree?

Mr. Wolf: Yes.

Q. Mr. Pickard, what kind of automobile do we have here? A. 1954 Ford convertible.

Q. Is this a standard production car? A. Yes, it is.

[240] Mr. Pollock: Will you please hold it up, and I ask the photographer to take a photograph of this wiper arm, this gentleman holding the wiper arm.

[The photographer complies.]

Mr. Pollock: What is your frame number on that plate? This is plate No. 49 and the exhibit will be marked for identification as Plaintiff's Exhibit No. 18.

Q. Now, Mr. Pickard, does this car have a trough in it? A. Yes, it does.

Q. Would you please show the Judge where the trough is?

[241] Q. Are there any fastening means on this drain trough? A. Yes. There is a series of tabs struck out of a separate piece of metal welded onto the bottom of the trough.

Q. These are prongs. A. We call them prongs or tabs.

Q. It has been stipulated this is an Aro top. Does it include an elongated flap extending down? A. Yes.

Q. Is this flap portion in any way attached to the prongs? A. Yes, it is.

Q. Will you show the Judge where?

[243] Q. Now, Mr. Pickard, what side of the car are we on? A. We are on the right-hand side of the car.

Q. Is the wiper arm in place? A. Yes, it is.

Q. Could you estimate how close the fabric is to the belt line of the car on the outside? A. We would consider that to be in contact, essentially.

Q. Could you insert your finger in there? A. No, you cannot.

Q. Can you insert— I have here a paper match book. Can that be inserted? A. No. You can't insert the small end. You might insert a piece of paper.

Q. Can you force it in place? A. No, you can't.

* * *

Q. Is there a cushion in this top? A. No.

* * *

[244] Q. What is disposed between the wiper arm and the belt line of the car on this side of the car? A. Just the fabric itself. Double thickness of fabric.

Q. Just the fabric material?

* * *

Mr. Pollock: I am asking the photographer to take a picture of the right-hand side of the car with the wiper arm in place.

[The photographer complies.]

Mr. Pollock: That is Plate No. 74, which will be the next exhibit number, 21.

Q. Now, Mr. Pickard, I will ask you one more question. Have you done anything to the wiper arm of this car in order to get the fit which appears on the right-hand side? A. No, we haven't disturbed this side at all. This is the way it came.

Q. In production cars have you ever observed a fit as good as this? A. Oh, yes.

Q. Is this the way it is intended to fit? [245] A. This is the way they are intended to be.

* * *

Q. Now I invite your attention to the left side of the car where the wiper arm has been removed. How close would you estimate the fabric is to the inside belt line of the car? A. Approximately $\frac{3}{8}$ of an inch.

* * *

[246] The Court: He said in order to bend it to effect a closer joint.

The Witness: We just take a wrench and give this a twist. If it is open here in the middle, you would do the same thing. You would put more curvature in it. If it is open here at the front you would put your bending iron at the front and bend it outwardly and that would close it up again.

Q. You are speaking of the wiper arm? A. The wiper arm.

Cross Examination by Mr. Wolf

XQ. I would like to ask you to perform one function on it. Can you raise and lower the top with the wiper arm off? A. Yes.

Mr. Pollock: Let the record show Mr. Pickard is getting into the car and is going to start the motor and lower the top.

[The witness lowers the top.]

XQ. Is this the—

Mr. Pollock: The top is now lowered.

XQ. Is this the position the top normally assumes when it is lowered? A. Yes.

XQ. Is there any displacement of the material down in the well because of the absence of the wiper arm? A. Not essentially. It may assume a slightly different shape, but essentially it is the same.

[247] XQ. In substance, then, the absence of this wiper arm has no effect on lowering the top; is that correct? A. That's correct.

XQ. Could you raise the top, please?

The Court: Wait just a minute. I would like to look at the other side. [Examining.] I will state to the untrained eye it is not observable whether the wiper arm is on or off.

Mr. Pollock: When the top is lowered?

The Court: When the top is lowered.

XQ. Before you raise the top, would you indicate, if you can, on this side the position that is normally assumed by the wiper arm in its down position?

* * *

[248] XQ. Could you raise the top, please? A. [Complying.]

XQ. Now you have just raised the top and locked in position. No one has touched the rear quarter in this portion in which the arm has been removed. Would you measure the greatest depth of the—the greatest space you can find between the fabric and the body of the car? A. That is approximately the same. 3/8 of an inch clear here, from the inside of the metal to the outside of the fabric.

Mr. Pollock: Would it be possible to take a photograph at this point?

* * *

Mr. Pollock: That was Frame No. 85 and it will be marked for identification as Plaintiff's Exhibit No. 22.

XQ. For the purpose of the record, how long was that ruler you were holding? A. 5 inches.

XQ. And you were measuring, when that picture was taken at the greatest depth; is that correct? A. That's right.

* * *

[249] XQ. The wiper arm is off. Do you think you could reach your hand in there and remove the fabric from the trough and reach your hand forward towards the door? A. No, you could not.

XQ. You could not do that, even with the wiper arm removed? A. No.

* * *

[253] Mr. Wolf: I would like the photographer to take a picture of the witness pointing to the left fender well.

[The photographer complies.]

The last part, which is relatively brief, appears at pages 67-8:

[220] "263 Q. But would you say that the top fabric itself is a material part of the folding top assembly? A. I would say that the actual fabric itself, without it, it is not a convertible top.

264 Q. That is right. Now, in this particular fabric, Part No. 134, you have a part that comes down and fastens inside the car by being fastened to the top, is that right? A. That is correct.

265 Q. Would you say that that particular section of the fabric which extends inside of the car and fastens to the trough is fairly important in keeping water out of the car? A. Yes.

266 Q. Would you say— A. In keeping it out of the car, but I was going to say—.

267 Q. Keeping it out of the interior of the car? A. Keeping it out of the interior of the car. The fastening to the trough is very important, yes.

268 Q. Am I correct in stating that one of the important improvements in folding tops of the type used on the 1952, 1953, and 1954 Fords, by way of example, is the fact that the fabric comes down into the car and is fastened on the [221] inside of the car so no water can get on the interior of the car itself and any water which does seep down past the fabric goes into the trough? A. That is correct.

269 Q. Does the idea of having a section of the fabric coming down inside the car and actually fastening on part of the car, for instance, adjacent to the trough, is that the important thing? A. That is correct."

Redirect Examination by Mr. Pollock

Q. I have just a very few questions, Mr. Booth. Yesterday, in your cross-examination you were asked a question and gave an answer which appears at page 148 of the transcript. I should like to read the question and answer:

"Q. From your examination of the particular top that you saw,—"

and I might note we were speaking of Top 134 on a Ford automobile—

"—would you conclude that no effort was made to provide in this particular top a seal in the sense of closing the distance between the wiper arm and the body line? A. Well, I saw no evidence of any effort to obtain a seal."

Would you please explain what you meant by that answer?

[222] A. I understood the question to mean was there anything done other than by way of addition I should say to the structure of the top fabric or car itself to press the fabric tightly against the belt line. For example, by addition of pads or perhaps by bending the wiper arms. I saw no evidence that any pads had been added or any bending of the wiper arm had occurred, or that anything had been done other than merely installing the top on the car.

Q. In this case, however, was there a seal? A. Yes.

* * *

[224] Q. Do you consider the word "seal" to be an absolute term? A. No. Very few terms are absolute. When you are speaking, for example, of sealing a delicate instrument where hermetic sealing is required, you are talking about exclusion of all gases, moisture, everything. When you are talking about sealing against access of water a much less effective seal would be required because such a seal might well pass gases or air but exclude water. There could be all sorts of degrees of sealing.

Q. Do you consider that the different terms used in the

Mr. Pollock: While we are in this trunk, will you please lift up what you have been calling the recess well cover [254] with your left hand and point with your right hand to where the luggage would go?

Mr. Wolf: That was picture No. 87, which will be Plaintiff's Exhibit No. 24 for Identification.

Mr. Pollock: Don't lift it up so high we can't see the recess well.

The Witness: This is made so we can raise it that high.

Mr. Pollock: Could you take it from back here?

[The photographer takes a picture.]

Mr. Pollock: That is No. 88, which will be Plaintiff's Exhibit No. 25 for Identification.

* * *

[257] *Redirect Examination by Mr. Pollock.*

Q. I would like to ask one question on redirect before you do anything else. Do I understand your testimony correctly—did you say if the trough were to have too much water in it, it might spill over the trough and contact water damageable parts of the car? A. Yes, it would.

Q. Where did you say these water damageable parts were? A. The linings and the inside top materials attached directly to the main trough.

[258] Q. Did you also say that the water could spill into the luggage compartment? A. Yes, from there and from over in here and into the luggage compartment [indicating]. We have had that happen.

* * *

Re-cross-examination by Mr. Wolf

XQ. This arm is bent out of shape, is that correct? A. That arm is approximately the correct shape as it was.

* * *

XQ. And it was quite a job? It is quite a job, in so far as you had to apply quite a bit of force to bend it out? A. No, it is not. You can bend that very readily.

XQ. Using a lot of leverage? A. No, just using a wrench.

[259] XQ. Using substantial leverage? A. I can bend it even like this [illustrating].

XQ. There is no way of adjusting this other than by bending it the way you did? A. Yes. These holes are made for adjustment.

Mr. Pollock: You are speaking of the holes in the bracket at the edge?

The Witness: The holes in the bracket are there so it can be adjusted in or out.

* * *

[261] *Further Redirect Examination by Mr. Pollock*

* * *

Q. Mr. Pickard, there was some discussion relating to the bending of the wiping arm. A. Yes.

Q. How difficult a job is this? A. That is a very simple job.

Q. Had you ever done or seen such a procedure done before? A. Yes. That is a customary operation. In the building of [262] an engineering car we have to do these things to accommodate the handmade bodies.

Q. If a car is brought into the shop with a gap in it between the fabric and belt line would anything be done about this gap? A. Yes.

Q. In normal practice? A. Yes.

Q. How would you correct for the gap? A. We would correct it by either moving the bracket over at the rear by means of those elongated holes, or if that was not enough we would bend the bracket where required.

Q. You are speaking of the bracket on the wiper arm? A. The wiper arm, yes.

* * *

Q. For the fabric we did observe has it been your experience the fabric tends to chafe in the area of the rear quarter? A. No, it does not.

Q. Have you ever seen such chafing? A. I have never seen it.

Q. Adjacent the rear quarter? A. No.

Q. I believe we have heard testimony to the effect that there [263] is a scissors action because of the wiper arm and body line. Have you ever observed such a scissors action? A. No, I have not.

Q. How many of these cars have you seen? A. Well, we have built a good many of them in our experimental work for test purposes, and also it is necessary for my men and myself occasionally to follow production cars. If there was that trouble we would be involved in it.

Q. Have you ever encountered any complaints to the effect that the fabric chafes in the area of the wiper arm? A. Never.

[264] Q. Would you explain what the typical or usual rear quarter construction was for the General Motors convertible automobiles prior to the year 1950? A. Prior to 1950 General Motors used a channel attached to the belt rail on the quarter and a reinforced section which you might call a cuff on the bottom of the quarter fabric. That cuff engaged the channel, making a locking arrangement.

Q. Did the General Motors Corporation ever use any other construction adjacent the rear quarter? A. Yes. They have used fasteners.

Q. What kind of fasteners? A. We usually call them Durable Dot made by Carr Fastener Company.

Q. The typical rear quarter construction for Ford automobiles prior to 1952? A. They have used a fastener also.

Q. What kind of fastener? A. The Durable Dot fastener.

Q. Did the industry recognize any disadvantages in these types of fastening means? A. We did, definitely.

Q. Could you elaborate on what the disadvantages were? A. One of the main disadvantages was that the owner had

to engage or disengage the fasteners at the belt rail when lowering or raising the top. The second was that in some cases, if he [265] neglected to disengage the fasteners at the belt, when he lowered the top, and the fastener stuck, thy pulled right through the top material. We have had cases of that kind. Another very definite disadvantage was the fact that the material was attached with these fasteners on the belt, and there would be a shrinkage of the material to such an extent that after the top had been used for some time it was very difficult and in some cases impossible to reattach the fasteners, after the top had been down in the well for a given length of time.

Another disadvantage was that the top was opened by means of these fasteners, and it wasn't what you might call thief-proof, or at least it left the impression on the owner that it would be very easy for a thief to get in and steal articles on the rear seat cushion or even open the door.

* * *

Q. Did these constructions in any way solve any of the disadvantages which you have just enumerated? [266]
A. Yes.

Q. Would you please elaborate on how they solved these several disadvantages? First, the queston of the fastening.
A. The question of the fastening was a very definite improvement because it was not necessary to fasten or unfasten the fabric. The top was what we call an automatic top. It could be raised and lowered without any thought of fastening or unfastening any fasteners at any point.

Q. Now the question of shrinkage? A. Yes. The top being more permanently attached at the belt and attached at more points, it provided a better arrangement for securing the material at the belt, and in that area, so that the shrinkage could not occur.

Q. How about the question of tearing of the fabric?

A. Well, there would be tearing at the fasteners because there was no fastener to pull out or to stick.

Q. Wasn't it possible for the fabric itself to tear loose from the fasteners, from the permanent fasteners? A. No, because the fastening was at what we call a hinge point, a natural po nt at which, when the top is lowered the fabric is loosened and never tightened more than in the up position.

Q. How about the question of locking the car? A. The locking of the car was quite a sales feature. The salesman could tell the customer that now his top was securely anchored, and that while thieves could cut the fabric and could [267] get in by other means, yet it hindered them from entering the car because of the material being securely anchored.

Q. When the 1952 Ford construction, the Ford convertible automobile, came out did they include a cushion in the fabric material? A. Yes.

Q. Was there such a cushion in the 1953 Ford convertible automobiles? A. Yes.

Q. Was there a cushion in the 1954 Ford convertible automobiles? A. No, there was not.

Q. Could you please tell us what happened to the cushion in the 1954 Ford convertible automobiles? A. The cushion was discontinued in the 1954.

Q. Are you speaking of original equipment? A. Yes.

Q. Could you please tell us why the cushion was discontinued in the 1954 Fords? A. Well, the cushion was originally put in because it was considered to take up body variations, but after its being in use for some time we found that by experimentation and development the cushion was not an essential part of the top and that the top could function fully as well without the cushion, and it reduced the cost.

Q. What is the function of the wiper arms in these vari-

ous [268] constructions that we have been speaking of? A. The function of the wiper arm is to hold the material against the belt rail.

Q. Does your statement apply when the top has a cushion in it? A. Yes.

Q. Does your statement apply when the top has no cushion in it? A. Yes.

What is the function of the trough in these structures we have been discussing? A. The function of the trough was to carry off any water that might seep in between the fabric and belt rail.

Q. How was the structure adopted on the 1950 General Motors car received by the industry? A. It was received very enthusiastically.

Q. Can you elaborate on that? A. Well, for years the convertible top, young fellows especially have wanted to get a top which was considered to be completely automatic. This was the first completely automatic top.

* * *

[269] Q. You were speaking of bending the wiper arm previously. Could such a procedure be followed on cars other than the 1954 Ford automobile? A. Yes.

Q. Could it be done on the 1953 Ford convertible automobile? A. Yes.

Q. On the 1952 Ford convertible automobile? A. Yes.

Q. Are you familiar enough with General Motors convertible automobiles to comment on whether or not the wiper arm can be bent? A. Yes, they could be bent.

Q. Is this a major job? A. No, it is not.

Q. Can it be done by trim shops? A. Yes.

* * *

[270] Q. From your experience in the replacement top field can you tell us whether or not a replacement top for one car and model will fit another car and model? A. No, it will not.

Q. Can you tell us why that is? A. Because of the size and shape of the body shell.

Q. Could a replacement top for a Ford automobile be used on a General Motors car? A. No, it could not.

• • •

Q. Do used car dealers ever use replacement top fabrics? A. Yes.

• • •

[272] A. The used car dealer, especially would rework the tops or replace the covering on the tops if his cars were not moving; that is to say, if they were not selling fast.

Q. Then they do replace the top? A. Yes, they would more than if they were moving fast. If they are moving fast they don't see the need of spending money on the car.

Q. Did you ever do work for used car dealers when you owned your own trim shop? A. Yes, I did.

• • •

[273] *Re-Cross-examination by Mr. Wolf*

XQ. Mr. Pickard, are the 1952, 1953 and 1954 Ford convertibles identical in so far as top construction is concerned? A. Yes, in general construction.

XQ. Isn't there some difference in the space between the wiper arm and body line in the 1954 Ford as compared with the 1952 and 1953 Ford? A. Space?

XQ. Yes, space. A. Do you mean at the quarter?

XQ. Between the wiper arm and body of the car. A. There shouldn't be any essential difference in the space between the wiper arm and the body.

XQ. Didn't you give an affidavit at one time to that effect, that there was a difference? A. Possibly I don't understand your question.

XQ. Do you recall the affidavit you submitted to this Court? A. Are you saying the bare body or the finished job?

XQ. Well, I haven't said either, but perhaps you could

explain it to me. A. Well, when we had a cushion on the quarter trim, it was necessary engineering-wise to space the wiper arm accordingly. When the cushion was taken off we moved the wiper arm out the distance of the cushion.

XQ. I see. In other words, there was a difference between [274] the production model 1952, 1953 on the one hand as compared to the 1954? A. The wiper arm was moved out the amount of the cushion.

XQ. But other than that the construction was identical to the 1954? A. That is right.

XQ. Would you estimate what this greater distance was between the wiper arm and the body? A. I don't know the exact dimensions, but roughly a quarter of an inch.

XQ. The Ford cushion was only a quarter of an inch thick? A. Compressed.

XQ. Compressed. Therefore, our examination downstairs of this 1954 model car would have revealed a greater space between the fabric and body line if it had been a 1953 car with an Aro top, is that correct? A. Yes.

XQ. What would you estimate the space to be if we used a 1953 or 1952 Ford car? A. Roughly a quarter inch more.

* * * * *

XQ. The car I saw downstairs, you had testified that there was [275] an eighth of an inch on one side and nothing on the other? A. Well, that is just a matter of adjusting the arm.

* * *

XQ. Do you think you could have gotten a Ford top with a cushion on to this particular model we saw downstairs if it were properly adjusted? A. Yes.

XQ. Wouldn't the fabric have jammed and caused some difficulty? [276] A. You could adjust the wiping arms.

* * * *

XQ. You said that the Ford Motor Company changed between 1952, or I presume you will agree that the Ford

Motor Company changed their models from 1952 to 1953 to eliminate the cushion? Is that correct? You have indicated that.

Mr. Pollock: 1952?

XQ. 1953 to 1954? A. Yes.

XQ. You further indicated the purpose was to save money and eliminate an unnecessary cushion, is that correct? A. That is correct.

XQ. I presume from this you mean that now you had found that by moving the wiper arm in close and eliminating the cushion completely you were still able to effect a seal in this area and prevent water from coming in, is that correct? A. That is correct.

XQ. In this particular construction, therefore, in 1954 you had a wiper arm that actually pressed the fabric up against the body line, and still did? A. That is correct.

XQ. You say you are familiar with the Aro 134 top. Will this [277] Aro 134 top fit the 1952, 1953 and 1954 cars equally as well? A. I should think it would.

XQ. Would you agree with me if I hypothetically had one of these 134 tops in a box and I sold it to someone, there would be no way of me necessarily knowing how this was to be used, on which particular car it was to be used? A. Yes.

* * *

XQ. With reference to a 1952 Ford having an original top, if you adjusted the wiper arm so that the wiper arm was close to the body line and in the same relative position as the 1954 Ford convertible wiper arm, what effect would you have? A. Well, it should be the same condition as the 1954.

XQ. I say, you had an original 1952 top on. A. Yes.

XQ. What might happen? A. The original 1952—you said you moved the other arm out?

XQ. Move the arm out toward the body line, in the same relative position as in the 1954 top. A. Yes.

XQ. What might happen if we did that experimentally? [278] A. Nothing.

• • •

A. With the cushion you would have too much pressure on the cushion.

• • •

XQ. Would you agree with me then, if we put an Aro top on a 1952 car water would pass freely down the side of the fabric, between the fabric and the body line of the car, that there is a space sufficient to allow water to pass freely? A. Would you say that again?

The Court: And the assumption is you do not move the wiper arm.

XQ. Upon the assumption the wiper arm is as it was originally on the car? A. No cushion?

XQ. No cushion. You are using an Aro 134 top on a 1952 model car. A. But you don't change the arms?

XQ. No. A. No adjustment? You would have likely a surplus of water that would enter the drain well.

[279] XQ. Presumably a substantial portion of the water running down the fabric would roll right past the body line into the trough, is that correct? A. That's correct.

XQ. While we were outside we looked at this wiper arm. Would it be fair to say from your examination of the wiper arm in position and out of position, with the top raised and lowered, that the sole purpose of the wiper arm was to create the seal? A. It is to reduce the opening guarding the water entrance, and also it is an appearance item. From a convertible top standpoint and styling we wouldn't accept the top with a hole in it, as you saw it there on the right-hand side or the left-hand side.

XQ. About 3/8ths of an inch? A. Yes. That would not pass inspection, just from an appearance standpoint, even

though the water could all be carried away. From an appearance standpoint it would not pass.

XQ. This is strictly from the point of view of Ford Motor Company production engineering and quality control? A. That is correct.

The Court: Do you mean by that some people wouldn't care what their car looked like, and he is not talking about them, or what do you mean?

Mr. Wolf: Yes, your Honor, precisely. As a matter of fact, I might follow this thing through one step further.

[280] The Witness: We find that the people who buy these cars are very fussy and do not want holes in them.

XQ. Are you familiar with the replacement top field? A. Yes, somewhat.

XQ: Has it ever come to your attention that replacement top trimmers do not bother to put on these wiper arms when they happen to be missing? A. Well, my experience is that no authorized convertible top man would do that. Now that is what we term a back alley trimmer, and of course they do anything.

* * *

[282] XQ. Did the 1953 Chevrolet and Pontiac automobiles have wiper arms? A. Yes, they did.

XQ. Did the 1954 Chevrolet and Pontiac have wiper arms? A. No, they did not.

XQ. What was the difference in the construction of the convertible top arrangement in those successive years? A. Well, they used a different method of sealing. Instead of having the cushion, they had the channel on it.

XQ. Let's talk about the frame first. Was the frame identical? A. Essentially it was identical.

XQ. Are you aware of the fact that the identical fabric top would fit both cars? A. Yes.

XQ. Are you aware of the fact that the Aro top part

number is the [283] same for both years? A. It could well be.

XQ. Are you further aware that the—pardon me—are you aware that the Aro does not sell a different model number for each of those different cars? Maybe you have examined some of this Aro top construction, I presume? A. Yes.

XQ. It would then be a fair statement to say the identical top can be used with or without a wiper arm? A. That is correct.

XQ. And it is perfectly accepted and approved as far as the installation is according to accepted techniques? A. On those particular models.

XQ. Yet the wiper arm isn't on one of them and is on the other? A. That's right.

XQ. Wouldn't you conclude from your examination of all these cars that have wiper arms and do not have wiper arms that this question of unwarranted access might, to some extent, at least, be a question of sales puffing of the patent application? A. No. It was also a matter of appearance.

XQ. I am talking about unwarranted access alone. A. Unwarranted access, it was a sales point, yes.

* * *

[287] The Court: I assume you have in mind the windows of the car might be open so that wind would come from the bottom?

The Witness: That's right. Do you see how these tops baloon? Like a drum on the top. They baloon four or five inches and it would blow that out so fast you wouldn't know what happened, if it wasn't anchored.

XQ. Have you ever had occasion to hear of replacement top manufacturers who don't bother to secure this fabric? A. I have never heard of it, no.

XQ. Have you ever seen a car that did not have the fabric secured? A. No, I never have.

XQ. I understand that the Ford top has three successive layers in the 1954 model in the flap area; is that correct? A. That might be considered as three. It has a folded over section for reinforcement.

XQ. Is that all it is for, reinforcement purposes? [288] A. That's all.

XQ. Where is that folded over section? A. Adjacent to the belt rail.

XQ. Between the belt rail and the wiper arm? A. That's right.

XQ. So in this model car we saw, that would provide somewhat of an additional seal; is that right? A. That's right.

• • •

[289] XQ. Can you tell me on the car what the tolerances are, in the Ford Motor Company productions, in the area of convertible tops? What sort of tolerances do they try to work toward? A. I would have to know specifically where you are referring to these tolerances, because we have different tolerances for different things.

• • •

[290] XQ. Not the wiper arm per se, but the location of the wiper arm. A. I couldn't give you the exact tolerances. It is usually given on the drawing and—but the wiper arm likely would not be in—at the bracket at the rear, would likely not be more than an eighth of an inch mislocated.

• • •

XQ. You spoke before about applying a water test to this particular model car we saw and you said you applied it to the right side. Did you apply any water to the left side at any time before you altered the wiper arm? A. No, we did not.

XQ. Do you know what the results would have been had

you done that? A. Well, only by assumption from other cars that we have water-tested.

XQ. What assumption would you have made? [291] A. Well, the way that we saw the job originally, it was roughly 1/8 of an inch gap there between the fabric and the body panel. An eighth of an inch gap we would say would be about the major tolerance and you would likely be able to shed all the water off, and the rest of it that went in would likely be carried off by the trough.

XQ. So anything more than an eighth of an inch you would say would probably substantially all go down into the trough; is that right? A. That is true. However, you have got to consider the different types of rains, whether the car is standing in it, rain beating in the side or the rain coming straight down or it is an all-day rain.

* * *

The Witness: Yes, I understood the question but I could not say all the water would go down in the trough even if it was 3/8 of an inch, because if you had rain coming from a certain direction, the top may be able to shed it and may be able to take care of it, depending on the extent of the water—

The Court: I misunderstood the purport of your answer.

XQ. In other words, what you are saying is if there is a deluge, [292] and perhaps a heavy wall of water— A. That's right.

XQ. —and the wall of water may be has a depth of 1/4 inch, it is perfectly obvious not all of it will be able to force its way down between that gap? A. That's right.

XQ. But if the wall of water is 1/16 of an inch high, or if it is discontinuous, as in the case of raindrops, or a stream which might have a chance to spread out, it will possibly go between the fabric and the body of the car; is that right? A. That's right.

XQ. So to some extent it is a function of how much water you are going to pour down? A. Yes.

XQ. And if you take a bucket and pour it all at once it is not going to have a chance to get in? A. That's right, or the amount that gets in may not be able to get out readily.

XQ. Under ordinary circumstances, from your testimony I understand you to say that if the space is greater than 1/8 of an inch you find it is not satisfactory? A. That's right.

[293] A. May I say we have found in our tests that to make a satisfactory car, that we do not want a car to go off the end of our line with over an eighth of an inch opening in there, and that could take care of those rains, as you get them, and also snow, which is a very important part.

XQ. It would take care of wind and other weather conditions? A. Yes.

[294] XQ. Now did you ever say you never saw the condition of chafing? A. No.

XQ. On any kind of car? A. Not at the belt.

XQ. At the belt line? A. That's right.

[302] *Redirect Examination by Mr. Pollock*

Q. Mr. Pickard, you said that if a 1952 Ford were to have an Arq top put on it with no cushion and with no adjustment of the wiper arms there might be a large enough gap between the fabric and belt line for a substantial amount of water to pass to the trough, A. That's correct.

Q. Would you consider that this would be a proper installation? A. No, I would not.

Q. Would you consider that the wiper arm is performing its intended function? A. No.

Q. How would you correct this, if you could? A. I would correct it by adjusting the wiper arm.

Q. Again, would this be a major job? A. It would be a very small job.

* * *

[303] Q. I believe you also stated that if there was a gap any greater than one-eighth inch on a Ford production convertible automobile that would not pass inspection. A. That's right.

Q. That would not be within tolerance? A. That's right.

Q. However, would you pass a car with a one-eighth inch gap? A. Yes.

* * *

Q. Would you consider a car with a one-eighth inch gap still has a seal at the belt line? [304] A. Yes.

* * *

[305] Q. Did you say that the 1954 Pontiac had a bar inside of it? A. That's right.

Q. Have you actually seen this bar? A. Yes.

* * *

Q. If this bar were removed, would you have a larger hole at the belt line? A. You would have to anchor it somewhere. The bar is simply a method of attaching it.

* * *

[308] EDWIN C. PICKARD, Resumed

Examination by the Court

Q. In connection with your work in the automobile industry do you have occasion to be acquainted with the relative prices of different models of cars? A. No, I do not.

* * *

[309] Q. Is there any general principle in the industry as to how long a convertible top may normally be expected to give good wear and good appearance? A. Well, ordi-

narily they figure the top should be satisfactory for a year. But in our Service Department, if they have a situation that they feel is warranted, in other words, that the customer has carefully taken care of his job and yet the car has not given satisfactory service, they will take care of a customer. And in that respect, concerning a convertible top, [310] they would send the top back to the Engineering Department through the Service Department. We have a Service Engineering Department. And eventually it reaches the specific engineer in charge of that section and on the convertible top section that would be my department.

[311] The Court: I didn't mean so much how long a time you would replace a top free; I wondered whether there was any general expectation in the industry as to when a customer would expect to receive the full length of service that a convertible top will give him.

The Witness: No, your Honor. That would depend largely on the conditions in which the car is placed. In other words, if you had your car stored in the open and stored near a place where, perhaps, you might have damaging fumes, for instance, that might damage your top in a very short length of time. Whereas, you may have a car and keep it in a garage at night. When you drive downtown to your work, wherever it might be, you put it in an enclosed garage, protected, this top might last a lot longer than another one which is exposed to the elements.

The Court: Even under those conditions, is it fair to say the top will presumably not last as long as the rest of the car?

The Witness: That is right.

The Court: Could you say as to, under those conditions, how many tops a man might normally expect he would

buy if he kept the car himself until it was pretty well run out?

The Witness: I would say if you are a particular owner and you want to keep the car in good shape, you would really want to replace the car—the top, in roughly three years. If it was particularly protected and cared for under good conditions, [312] it might last four or five years. I would say normally—

The Court: Conversely, if I had no garage, stored it outdoors, it would be less than three years?

The Witness: It might be less than three years.

The Court: Without any legitimate complaint on my part against the manufacturer?

The Witness: That's right.

* * *

[332] Mr. Wolf: In so far as the question of infringement is concerned, I believe the remarks which I have just made cover a good portion of that position that we now have, that we don't infringe, and that we don't provide a seal we don't intend to provide a seal and we allow as much water as possible to pass between the body [333] of the car and the fabric, and we have no intention whatsoever of attempting to close off the water coming in and that the function of the wiper arm in that instance is, as far as we are concerned—

The Court: Do you mean that, that you try to let the water get in?

Mr. Wolf: We don't try, but we don't care. As far as we are concerned, it makes no difference because we found that the trough is sufficiently big to carry off the water that does get in.

* * *

[341] HAROLD SHAPIRO, Recalled

Direct Examination by Mr. Wolf

* * *

Q. Mr. Shapiro, what kind of car did you bring with you today? A. 1953 Ford convertible.

Q. Where did you get it? A. We borrowed it from an owner in Natick.

Q. When did you first see this car? A. The night before last.

Q. What kind of top has the car on it? A. An Aro top. I would say it was put on in August of 1956.

* * *

Q. Was this particular car which we are going to look at a [342] typical car or not a typical car of the cars you have seen in the 1953 Fords? A. I would say it is very typical.

Q. How would you compare it with the 1952 Ford? A. The body style is identical, the framework.

Q. What part number do you use on the top? A. 134.

Q. What part number do you use on the 1952 top? A. 134.

Q. And the 1954? A. 134.

* * *

[343] *Cross-examination by Mr. Pollock*

* * *

[345] City of Boston Parking Facility
Corner of Congress, Milk and
Federal Streets, Boston, Mass.

XQ. Is this the car to which you referred? A. Yes, it is.

XQ. You saw the 1954 Ford yesterday. I believe that this is the same car in position beside it? A. Yes, it is.

XQ. Can you tell me whether or not the folding bow structures are identical? A. I would say they are identical.

XQ. Will you also examine the inside and tell me whether

or not the covering material in the well is also identical with that car? A. Outside of color, it is identical.

XQ. Can you please tell me if you notice or if you know of any difference at all in the construction, as to any bow mechanisms, wiper arm and fabric tops? A. It is identical.

• • •

[346] XQ. I am going to hand you the same ruler Mr. Pickard used yesterday, and I would like you to measure the widest space you note between the fabric and the body line. What is the distance? A. [Examining] ½ inch. About ⅜ of an inch.

XQ. That is from the middle. What is it in the front end? A. The front end I would say ⅛ of an inch.

XQ. And at the rear end? [347] A. ⅜ of an inch.

The Court: Could I borrow that ruler a moment?

[The witness hands the Court a ruler.]

The Court: [examining] Counsel is welcome to measure it. I make it almost within a hair to ½ inch on the right-hand side of the car at the maximum space.

• • •

XQ. This particular car we are looking at now, could you tell me what type of fabric top was originally installed on this type and model car? A. You mean whether it was cloth?

XQ. No. Will you please describe the fabric in and around the belt line? A. The original top that was installed on this car had a sponge rubber cushion stitched on the inner side of the top material adjacent to the body and the wiper arm.

• • •

[348] Mr. Wolf: I would like the reporter to take a picture of the side that the Judge saw. Would you measure, at the same time, showing the greatest depth? I would like you to take a picture substantially from the same

angle that you took yesterday showing the measurement at this point.

[The photographer takes a photograph.]

• • • •

Mr. Wolf: Yes. C for Identification.

• • •

[349] XQ. Would you please indicate the nature of the test you normally conduct in determining watertightness of the car? A. We would say a car is watertight when 90 per cent of the water is dispersed on the exterior of the car. That was our original intention when we had our shingle under 134. Consequently we have made our 134 without a shingle or cushion and found that even by directing the water inside the car no effect to the watertightness or damage to the interior was shown.

• • •

[350] XQ. In using this particular test, on applying water with a sponge, have you found it satisfactory and reliable? A. Yes.

• • •

Mr. Wolf: Would you take a picture of this, showing the water draining down? [The photographer complies.]

• • •

Mr. Wolf: The picture just taken is Frame 62.

XQ. In applying the water just at that point, did you notice [351] whether or not more water went inside or outside? A. I would say all the water went inside the car.

XQ. I noticed there is some water on the body line here.

The Court: It went off the witness's wrist.

• • •

Mr. Pollock: We are speaking of the adjustment that is provided in the Ford cars. They have a long slot. The

wiper arm is pushed off in an inner direction as far as it will go.

XQ. [By Mr. Pollock] Could you measure the area now with the wiper arm pushed over as adjusted? A. I am pushing the adjustment of the wiper arm over to the fullest. I don't want to push the wiper arm but the bracket. I am pushing where the bolts are.

[352] XQ. At the forward end of the wiper arm?

The Court: The forward end of the wiper arm is just about 1/8th of an inch [after measuring].

* * *

[353] Mr. Wolf: Would the court reporter note that the wiper arm is being held in as far as it can go by Mr. Pickard while Mr. Shapiro is now applying a quantity of water by means of a sponge?

Mr. Pickard: There is interference in behind this bracket. It can't be pushed over.

The Witness: Just where the bolts are, Mr. Pickard. Hold your finger in there the way I did when the Court measured it.

Mr. Pickard: There is stuff in behind here. Let's get that stuff out of there.

Mr. Wolf: Mr. Pickard says there is a retaining member which affects this.

Mr. Pickard: It has been half taken off, and there is fabric in here.

* * *

Mr. Wolf: Is it substantially correct, Mr. Pickard?

Mr. Pickard: No, it is not. This bracket, do you [354] see this? This is in behind here—it is all bunched up in behind so you can't push the bracket out.

The Witness: There are two elongated holes. The metal, it is up to the fullest on the elongation right now.

Mr. Pickard: No, it isn't.

The Witness: That is the way it came from the Ford Motor Company.

Mr. Pickard: The other side isn't either.

The Witness: Nobody ever adjusted that. I'm positive.

Mr. Pollock: Somebody must have.

The Witness: They don't take the wiper arms off.

Mr. Wolf: Do your best, Mr. Pickard.

Mr. Pickard: It's only half-way. Do you see all this stuff that is bunched up?

Redirect Examination by Mr. Wolf

* * *

[356] Q. When you just had the wiper arm pushed out as far as it would go, is that a normal position for this particular type of car? A. I don't know what the normal position is. To my knowledge nobody ever adjusted it. They just take it the way it comes from the plant. On all the ones we have seen there has been at least 3/8ths of an inch space between the belt line and the wiper arm.

Q. Would you complete removing the wiper arm? A. Yes.

* * *

[357] Q. Will you measure that again, please?

Mr. Pollock: Without pushing it.

Q. [Continuing] Without pushing it. A. [Complying] Less than ½ inch. About 7/16.

Q. At its deepest point? A. At its deepest point.

[358] Q. That is with the wiper arm removed? A. Yes.

The Court: This is on the right-hand side where it previously was something less than that?

Mr. Pollock: It was previously ¼ of an inch.

The Court: And about 3/8 before it was adjusted at all.

* * *

Q. And satisfactorily. Now can you release the fabric from the prongs at the lower end? A. [Complying].

Q. Will this top operate, raise and lower, and the fabric come [359] back in the same position as it is now with that fabric released? A. Yes.

Q. Will you try it, please?

* * *

Q. Will you please lower and raise the top? First lower it. A. [Complying.]

* * *

[360] Q. All right. Now raise it, please. Notice the fabric is torn away a bit there. A. [Complying.]

Q. It is now locked in place. Without touching the material will you please indicate whether or not that, in your opinion, is, in substance, in the same position as before lowering? A. I would say in substance it is exactly the same.

Mr. Wolf: I would like to have a picture taken of this, please. Will you please indicate the depth with the greatest penetration, with the ruler?

[The photographer takes a photograph.]

Mr. Wolf: That is 119, which will be Exhibif D. Could you take one further picture from an angle looking inside to show the fabric unattached on the inside?

[The photographer complies.]

Mr. Wolf: That was pitcure frame 120, which will be Exhibit E.

[361] Q. [By Mr. Wolf] Mr. Shapiro, could you take the lower end of this fabric, which you have now unattached, and wrap it around that wiper arm and secure it in some fashion to the wiper arm? A. Yes.

Q. I have here a paper clip. Perhaps this will help hold it in place [handing paper clip to the witness].

Mr. Wolf: I would like to have a picture of this taken

from the inside, showing the fabric secured to the wiper arm. [The photographer complies.] That is Frame 118.

Q. Now would you indicate what spacing you see when the fabric is in that position? A. I would say a quarter of an inch.

Q. Maximum? A. 5/16ths.

Q. Would you raise and lower the top? A. Yes. [The witness lowers the convertible top.]

Q. Would you raise it now please? A. Yes. [The witness raises the convertible top.]

* * *

[363] Q. Mr. Shapiro, would you please examine the paper clip which we used to secure the flap, and indicate whether or not it is substantially or not substantially in the same place? A. I would say it is in the same position as before we lowered it.

Mr. Wolf: Would you take a picture please? [The photographer complies.] That is Frame No. 115. I would like another picture taken of this side, from this side, showing the fabric top in its raised position, with the fabric attached to the wiper arm. [The photographer complies.] That is Frame No. 63.

* * *

[364] Q. I believe you mentioned, during your direct testimony with Mr. Pollock, that it was possible to secure this fabric to the outside of the car and I think you indicated it had been done occasionally. Can you demonstrate that for us right now? A. Yes, I could. [Complying.] Two fasteners can be installed.

Q. Can you install them right here? Will it take long? A. No, it will only take a minute.

Q. All right; will you install them? A. [Complying.] Of course the window channeling can be put down. When the top is lowered these can be released and the top will go down in the regular fashion.

Q. Do you know whether or not this is done with your tops? A. I have seen it done. It certainly simplifies it for a trimmer if he is pressed for price or if anything is wrong inside on the car, or the prongs are broken off. This would speed it up. A full installation is two hours. He can speed it up a half an hour, or 25 per cent. It would be 1000 per cent more rainproof in this fashion.

Q. You are speaking of the top with the snap fasteners on? A. Yes. This is made similar to your Honor's 1950 Plymouth with the two snaps.

* * *

[365] Mr. Wolf: I would like to have a picture taken from this angle over here.

[The photographer complies.]

* * *

Mr. Wolf: That was Frame No. 64, for Identification.

* * *

[366] *Recross Examination by Mr. Pollock*

XQ. How long did it take you to convert from the top structure with the long flap inside the car to one with snap fasteners on the outside of the car? A. You mean on this installation?

XQ. On this particular installation this morning. A. Oh, I would say about 2 minutes.

* * *

[367] *Redirect Examination by Mr. Wolf*

Q. Mr. Shapiro, in the demonstrations that we have just conducted, we demonstrated the car in connection with the 1953 Ford using an Aro top. One of the demonstrations included releasing the fabric from the fastening to the body of the car and raising and lowering the top. Will you please tell me what would happen if you had had an original top on there? A. I think it would act in the same manner, exactly.

Q. Would you—if you had an original top with a cushion,

what [368] space might you find, if any, between the wiper arm and the body line? A. Probably none.

• • •

[371] Q. I would like to keep the record straight by offering—I would like you to first identify these two pieces of fabric which we have marked for identification as Defendants' Exhibits A and B. Will you identify them, please?

• • •

[372] A. These were taken off a 1953 Ford in our own trim department and saved for this demonstration.

Q. Did you see it taken off? A. Yes, I did.

Mr. Wolf: I offer this as Defendants' Exhibits A and B, your Honor.

• • • • •

[374] A. A top possibly could chafe on one of the bows on the upper structure, say at the curvature; if it started to show any signs of wear, in all probability he would go back to his dealer, who in turn would try and make some kind of adjustment so the bows folded more properly. Down in this section here, where it is partially submerged in the body line and partially above the body line, and especially at the front, there is absolutely no adjustments on this wiper arm. I will go along with Mr. Pickard's statement that there is an adjustment at the rear.

• • •

[377] Q. You also indicated that you designed your top independently of the original type of manufacture. In so designing yours, do you make any changes or do you try to follow as closely as possible the original models? A. No. The only changes we make are leaving out what we feel is unnecessary, without affecting the workings of the top. In other words, the weatherproofing, and so forth. We try to bring down our cost as low as possible and still turn out a quality product.

Q. What changes might you make or do you make? A. The only thing we follow on the original top is, like I [378] said in my previous testimony, when a Ford goes down the street we like to have it look like a Ford and if it is a Chevrolet we like to have it look like a Chevrolet and not like a Chrysler. That is only in relation to the size of the opening in the rear, to accommodate the curtain, and approximately the location or style of stitching that is used.

Q. What other variations can you have? A. The valance section, which is the rear section. The Chevrolet runs their seams in on an angle. Ford runs their seams straight. I have seen custom-made tops where they have angled in a Ford seam, and to me anyway it looked as if it were a Chevrolet going down the street if you looked just at the top.

Q. Yesterday Mr. Pollock asked you, or the day before he asked you, the number of models that you make for cars which embody this wiper arm, of which apparently the plaintiffs are complaining. I believe you said something like seven? A. That is right.

Q. I further believe you indicated there are approximately 140 different models you offer for sale. Could you tell me with that background what percentage of the 140 models volume-wise are constituted by the seven models of which the plaintiffs complain? A. I would say today about 75 or 80 per cent.

[379] Q. Of your total business? A. Yes.

Q. Could you please tell us what type of competition you have in this particular field? A. Well, we have several competitors, like all businesses. We compete with each individual trim shop. You could call that 15,000 competitors. We have top manufacturers. We have approximately seven or eight so far.

Q. Do you know the names of any of these? A. Yes,

I do. One is Rayco of Paterson. We have Crown Auto Top of Columbus. We have Atlas International, Chicago. B. T. Crump, Richmond. We have Acme Headling Company, San Francisco. I believe it is San Francisco. It is California, anyway.

We have Trio in Brooklyn, New York. I don't know whether Brooklyn Fabrics and Trio are the same company. There is Nu-Top in New York.

Q. Do these companies and Aro Top Sales sell locally or how do they distribute their sales, as far as you know? A. They distribute in about the same that the rest of us do. It is either direct selling to the trim shop or they sell to a jobber or they do mail order. They sell locally word to mouth with the salesmen.

Q. Exactly what are the products of these companies and your company? Would you describe them? [380] A. Well, they sell convertible tops, replacement rear windows, pads, and some of them sell fabrics.

Q. Speaking about the manufacture of Aro Manufacturing Company, Inc., will you please tell us just what you make? A. Aro Manufacturing Company, we make convertible tops primarily. We make plastic rear windows. We make pads. We make danger flags. That's all, I guess.

* * *

[381] Q. Just what do you sell to these jobbers and shops? A. Convertible tops, rear curtains, plastic curtains.

Q. But with respect to the fabric tops, how are these sold to them? A. They are boxed as a unit.

* * *

Mr. Wolf: This is Plaintiff's Exhibit No. 11 and it was also Exhibit No. 17 during the deposition.

Q. Will you identify the various components which go into the box? A. Yes. This is the rear curtain that is supplied with the top and it is optional with the trimmer who confers with his customer whether he is going to

put the glass frame back in here or he can sew his own plastic in and make a full view curtain. If they order it as such, we also make it as a full view curtain with plastic on the insert.

Q. This is a solid piece of material? A. Yes.

Q. You mean this is taken out and a curtain is put in or stitched in? A. No. The trimmer, or the ultimate person that is going to install it, will sew a piece of plastic right along this bottom [382] stitching and then trim off the excess in here and trim this section of the cloth out.

Q. So he has to further process this and use a sewing machine to do it? A. Yes. He can order it this way or order it with a complete full view curtain. If he orders with full view curtain he is ready to go to work. There is a savings to the shop by buying it this way..

Q. Do you sell many this way? A. Yes.

Q. Will you estimate the percentage that go out in this condition? A. Oh, I would say about 60 per cent go out in this condition.

Q. This is the rear curtain area? A. Yes.

Q. Is the entire piece of fabric considered the rear curtain? A. Yes. Rear curtain assembly.

Mr. Wolf: Could we have this further identified by the Clerk? I believe the entire exhibit is No. 11. I think perhaps it would be better if we could identify portions of it; perhaps 11-A.

[Rear curtain area marked Plaintiff's Exhibit No. 11-A.]

Q. Will you please take the next piece? A. This strip of material approximately 3 inches by 60 is supplied on certain models of cars, Aro Part 130, 132, 134 and several of the General Motors cars of the later variety, and this [383] is to cover the front rubber strip located between the windshield and the front bow.

Q. Does that appear on all cars? A. Not on all cars. It appears on 130, 132, 134.

Q. I mean all the models? A. Yes, it has to be there.

Q. This is not an optional piece of material? A. No. This is to cover that foam rubber cushion between the windshield and the front bow. To make a weather-tight seal.

Q. How is this put on? A. That is covered and tacked on.

Q. Is there any stitching on this? A. It can be stitched or just put on, held by hand.

Mr. Wolf: I will offer this for further identification.

[Strip of material marked Plaintiff's Exhibit No. 11-B.]

Q. Please take another piece of material. A. The rest of this material is the top itself.

Q. You mean there are only three pieces in this? A. Well, there is trim, there is finish lace and the tacks.

Q. Look at the finish lace material first. A. This trim called Hidem is a two-cord 5/8 inch piece of material which opens in the center to accommodate a tack or staple. Then it is closed up in this manner so as to make a finish, and the other name for this material is the finish lace.

Q. Where does that go? [384] A. After the top is completely tacked on, all excess material is trimmed close to the tacking area and this covers the tacking area so there aren't any tacks showing on the outside of the car.

Mr. Wolf: I will offer this for further identification.

[Trim lace marked Plaintiff's Exhibit No. 11-C.]

Q. You have a bag there. A. This bag is something that we put into each of our units. It consists of ¼ of a pound of No. 6 light trimmer's tacks, six finish tips; those little chrome ends that go on the end of the finish

lace and six escutcheon pins, annular threaded, that go through the hole in the finish tape and secure it to the bows.

Mr. Wolf: I offer that.

[Bag containing hardware marked Plaintiff's Exhibit 11-D.]

Q. Now let us turn to this. A. This is the top proper, consisting of a left and a right side quarter, properly reinforced and bound, a valance which is the rain flap that goes on the outside of the rear curtain, and a center deck.

Q. In installing this, apparently they have to lace these things together; is that correct? A. They have to put the curtain on first and get that secured. Then the top is thrown over the car and the window flap is cemented in position first to assure the lining up. Then the—we are talking about a 134 now; right?

Q. All right. [385] A. Then the bottom side quarter adjacent to the section that goes inside of the car is spot tacked around the outside of the belt rail. Of course, previous to this the old top is taken off and the chrome strip around the outside of the car is also removed from inside the trunk, leaving a pack strip which is put there by the original manufacturer.

Q. In other words, they have thrown this over the frame after they have stripped it? A. That's right, after it is all stripped. Then it is down to this lower area from—

• • •

Q. And is tacked down? A. Then the top is pulled forward on the forward edge and the binding is lined up with the side windows for the best coverage and tacked in that position to a tacking strip also furnished or equipped on the original car.

The next process is—next step is to secure the valance or rain flap to the rear bolt, pulling up just far enough

to create a smooth appearance of the fabric over the rear quarter pad. The fabric is then slipped down between the wiper arm and the body and secured onto the existing prongs.

[386] Q. Apparently, then, in the installation, no one ever bothers to touch the wiper arm which you have described? A. No. Not to my knowledge. I have never seen it touched.

Q. What are the necessary tools for installation of this type of top, then, in the trim shop? A. The necessary tools for an installation of this type in the trim shop would be a tack hammer and possibly a screwdriver.

Q. Didn't you previously indicate some sewing might be necessary, and also shears, apparently? A. Well, yes, shears are necessary for trimming off the excess, or a sharp knife. The sewing that would be necessary would be on the rear curtain section and the front flap which is generally sewed around this rubber cushion, so to speak, for the front bow.

Mr. Wolf: I am offering this for further identification.

[Top proper marked Plaintiff's Exhibit 11-E.]

Q. You have examined the contents of this box containing Plaintiff's Exhibit No. 11 and you tell me whether you sell this with any other material that might be contained in the box, or is that the substance of what you sell? A. This box was taken off our shelf. It was ready for sale. It was in the inventory.

Q. Were there any directions in it when you took it off? A. No, there weren't.

Mr. Wolf: I would like to have the box further identified.

[387] The Clerk: No. 11 is marked on there already.

Q. Does this description you have given us in connection with the 134 top hold for your other model? A. Yes.

All models are basically the same, as far as what components go into the boxes and so forth.

Q. Do you, at any time, ever sell these kits to car manufacturers as original installations? A. No.

Q. You have an interesting code system. Will you explain the code system, or is it just arbitrarily selected? A. You mean our numbering system?

Q. Yes. A. We started with Model A Fords back in 1928 and we started on numbers 1 to 2, 3, and 4, and so on. 100s are Fords and Mercuries, where the Mercury is the same as the Ford. No. 2 would be General Motors; No. 3 would be Chrysler; No. 4 would be Studebaker; No. 5 we skipped; No. 6 would be our foreign cars; No. 7 would be Packards; No. 8 would be Hudsons. Consequently, if somebody said, "I want a top for a 1941 Ford," we knew to look in the 100 section.

Q. We have given considerable attention, Mr. Shapiro, or considerable attention has been given to the particular flap configuration of 134. Will you describe whether or not you have any other basic models that used this particular flap? A. No. These are the three styles we now manufacture.

Mr. Wolf: I am offering now three different pieces of [388] fabric.

Q. Will you first identify them? A. Yes. This particular one is what we call our shingle construction. This is designed with a half-inch roll stitched in and that sets in about ½ or ¾ of an inch above the body line and acts as an eave or a shedding device. This particular one is from a 1950-1951 Chevrolet, Pontiac and Oldsmobile, and the body line would be about ½ inch below this roll.

Q. Could you identify the other two pieces of material? A. Yes. This second one is the type that we use on our present 134s.

Q. The type of what? A. The type of flap and construction. There is no cushion and no shingle. This is just

a straight piece of fabric going down inside the car.

Q. That is the type we saw today in the garage? A. Yes, this is a 134 side quarter.

Q. Will you look at the third one? A. The third one is the type that, previous to notification of possible infringement, was the type that we were making and is still in existence on 1950, 1951, 1952, 1953 General Motors of original manufacture.

[389] A. That is a cushion sewed in and extending half above the body line and half below. It is approximately 2½ inches in height, and it has a heft of approximately ½ inch.

Q. Is this the type you say you made, well, before you were informed of infringement? A. Yes. This is a similar side quarter as was presented to me on the first day of the trial by Mr. Pollock, a top that came out of our box, No. 224, I believe, very similar in construction to it.

Q. Would you take this piece of chalk, please, and draw across in each one of these the location of the body line when the top is on a car?

Mr. Wolf: Properly installed.

Mr. Pollock: All right.

Q. Would you please mark it "body line"? A. Yes.

Q. You have done that on the top, the quarter, which you say was the type you made before notification of alleged infringement? A. Yes.

Q. Will you turn to the next piece of fabric, which is the type you say is made presently under the number 134? A. Yes.

[390] Q. Is that quite right? You have a little bow in the line. A. All right. [Witness draws chalk line on the fabric.]

Q. Would you mark that "Body line"? A. Yes.

Q. The third piece of fabric, please? A. The third is

our Model 224, which is the one that superseded the other one in question.

Q. Would you mark that with the line which indicates where the body line comes? A. Yes.

Mr. Wolf: I would like to offer these three in evidence as Defendants' Exhibits.

The Clerk: K, L, and M.

Mr. Wolf: I am offering as Exhibit K the fabric having a shingle, and L is the fabric with a cushion, and M is the fabric which has neither a shingle nor a cushion.

[Fabric having a shingle marked Defendants' Exhibit K;

Fabric having a cushion marked Defendants' Exhibit L;

Fabric without shingle or cushion marked Defendants' Exhibit M.]

Q. I noticed on that last exhibit submitted, Exhibit M, there was a double thickness of fabric. Would you explain the reason for that, please? In other words, the double thickness of the fabric at the flap area, so to speak? [391] A. The reason for that is it could be made in one piece with no effect on the function. We do that because it doesn't fit into our markers on the material very good, and consequently would create quite a waste of fabric, and that is pieced only for fabric-saving purposes.

Q. Where did you get this extra flap that forms the portion of the top which we have referred to today as the flap? A. Well, on a separate section of the marker there would be a space for it, and it wouldn't fit in if it were attached to the side quarter in one piece.

Q. Is that— A. [continuing] It could be where the valance is, a reinforcement. It may be an opening in the marker itself.

Q. In other words, it is an extra piece of material you

just placed into the overall design? A. Yes. And we seam it together to simulate a single construction.

Q. It has been stated several times, I believe, and I would like to have it clearly on the record at this point for continuity, and that is the purpose of this particular shingle as compared with the purpose of the cushion? A. Well, upon notification of possible infringement, this letter from Mr. Hall, we called in our attorney, Mr. Wolf, and he thought that there possibly might be some infringement. We asked his advice.

[392] Q. I don't want that. That has been gone into. I want specifically the actual different in function, one function compared with the other. A. I'm sorry. The function of the cushion is to make a seal as tight as possible between the wiper arm and body. The function of the shingle is not to make a weathertight seal between the wiper arm and the body but to shed the water from an arrangement above the body line, sort of a water chute.

* * *

[393] A. This is an Aro box, Regal quality, part 132, black outside, tan inside, fits 1951 Ford convertible.

Q. Would you open it up, please? Would you remove the various components which you find inside? A. We have a package of finished lace commonly called Hidem; we have a front strip approximately 3 inches by 60 inches to cover the front rubber strip between the windshield and the front bow. The tack bag is missing. We have a rear curtain assembly in cloth with a zipper, and we have a top assembly consisting of two side quarters, a left and a right, a valance and a center duct.

Q. Those are all stitched together? A. All stitched together.

Q. Will you open it up to substantially its full size? A. [Complying.]

* * *

[394] Q. Will you compare in toto the overall appearance and arrangement of this particular model with the 134 top? A. It is almost identical in design and practically the same in size all except for the section that goes down inside the car in the lower quarter.

* * *

Mr. Wolf: All right, we will disregard this, your Honor. I would like to offer this kit and its contents as an exhibit for the defendants.

[Box containing part 132 marked Defendants' Exhibit N.]

Q. Mr. Wolf: Could you identify the large piece of material by subscript, if possible?

The Clerk: The carton will be N. N-1.

The Court: The main top assembly.

[395] [Main top assembly marked Defendants' Exhibit N-1.]

Q. I would also like to ask with respect to Defendants' Exhibit 19 in the deposition of February 20, 1957, which models we originally presented did this correspond to? A. The shingle model.

Q. Is the shingle in substance identical? A. In style. Not length.

Q. Does this shingle have any resilience to it? A. No.

Q. What do you make the shingle from? A. It is a piece of fabric manufactured by the E. W. Twitchell Company of Philadelphia, called their half-round cord, firm. It is actually made of paper, similar to Kleenex if it was rolled tight.

* * *

[396] Q. In the other type of car in which you have no shingle, the 134 style, you just have a plain piece of fabric and I am wondering why you have a shingle on this particular construction and why you didn't put a shingle on the 134 type. A. The shingle construction

originally started with a precaution of possible infringement—

. . .

[397] Q. Could you indicate to the Court what the comparative expense, for example, in the shingle is as compared with the cushion construction? A. The shingle construction is very, very much of a saving in the manufacture over the cushion type. The roll that we put in there costs about a penny or a penny and a half a foot, whereas the shingle type I think costs us somewheres around 1s cents a foot.

Q. Now, you have a type 317? A. Yes, we do.

Q. What is that made for? A. That is made for a 1953 and 1954 Plymouth and Dodge.

Q. Do 1953 and 1954 Plymouths and Dodges have wiper arms? A. No.

Q. Does the fabric extend inside the body line at the rear quarter? A. Yes, it does.

Q. Does this 317 resemble, in any way, any of your other models about which we talked?

Mr. Pollock: Objection. What does the word "resemble" mean?

The Court: He said does it resemble in any way. I will exclude that as broad. You may lead the witness a little.

Q. Is your 317 type of top similar to, for example, your 134?

[398] Mr. Pollock: I object on another ground, your Honor. This Plymouth and Dodge construction is not one of those charged to infringe. It appears to be completely extraneous.

The Court: He may be getting to something. I wish you would lead the witness so we can find out.

Q. We have a 134, which you have spoken about, and a 317; is that correct? A. Yes.

Q. Is it not true these particular types of tops have generally the same cut and configuration? A. They are so close that if we didn't have parts numbers stamped on our segments of the top before they are assembled, it could be packed as a 134, it is so close in construction and design.

. . . .

Mr. Wolf: I would like, your Honor, without gilding the lily, to have the witness demonstrate the similarities of the two tops by comparing them side by side.

The Court: I think we will leave that for cross-examination.

Mr. Wolf: All right.

Q. I will, then, offer into evidence a 317. I will ask you first to identify it. This particular container which I now offer [399] to you. Will you identify that particular box? A. This box is a parts No. 317 box and a Regal quality. It fits all 1953 and 1954 Plymouths and Dodges. [400] Q. What does it contain? A. It contains a complete top assembly, two side quarters, left and right, a rear valance and a center deck.

Q. This center deck or the remainder of it is substantially the same as the 134? A. I would say that the important part of any top would be the side quarter section.

Q. The side quarter section? A. The side quarter section, it is practically identical. In fact I would have to scrutinize it myself.

Mr. Wolf: I am offering that as a Defendants' Exhibit. I also would like to keep the record clear, your Honor, to

The Court: I am going to exclude it. It may be marked for identification. I think we are going on a wild goose chase. I will leave it to the plaintiff to pursue the matter if he wishes.

Mr. Wolf: You are excluding this particular exhibit, your Honor?

The Court: Yes. The witness has testified to something which, it doesn't occur to me, to be material. If it troubles the plaintiff, the plaintiff can cross-examine. If the plaintiff does not wish to cross-examine, the testimony is in.

Q. Do you sell or make, or do you have facilities to sell or [401] make wiper arms, such as we have been discussing here? A. No, we do not.

Q. Do you sell or make or replace or in any way deal in drain troughs, such as we have seen in these model cars that we have examined? A. No.

Q. Do you in any way deal, in so far as sales or manufacture or repairs, in folding bows? A. No.

Q. Do you repair tonneaus? A. No.

Q. Do you at any time in your company, and I am speaking of both Aro Top Sales and Aro Manufacturing Company, conduct any repairs on the body of the car? A. No.

Q. The folding bow mechanisms? A. No.

Q. The drain troughs? A. No.

Q. Or the wiper arms? A. No.

Q. You spoke before about doing some small amount of work in connection with repairing cars to keep abreast of the trim field. In comparing these particular cars that come into your company for replacement of fabric tops, what do you do if there [402] is a broken wiper arm or bow, or something of that nature? A. We send it back to the dealer to get the body work finished, and then we put the top on.

Q. Do you have any knowledge as to what is customary among trimmers you have been associated with? A. Yes. If a car comes in and a wiper arm is missing, the trimmer will put the top on without the wiper arm. He might mention to the customer that the wiper arm is missing

and that he should go to his dealer, their authorized Ford or General Motors dealer.

Q. I pose the question: If the wiper arm is missing, from your knowledge do you ever find this wiper arm to be missing more than on an odd occasion? A. We have never seen one missing on a Ford. It is a common occurrence on, well, I couldn't say common occurrence, but it would happen, oh, one out of ten or fifteen on a General Motors car.

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[403] Q. What relations have you had with your dealers in so far as complaints are concerned? A. We have never had a complaint on the space between the [404] tonneau and the outside of the fabric, such as we witnessed in this last car that we have seen down in the garage. We have never had a complaint on the space in that area.

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Q. I am handing to you a series of work orders of apparently Aro Top Sales. Can you identify them, please? A. Yes. These are our office copies of bills and work that was completed. This one here is Invoice No. 28925, dated October 8, 1954, where we have changed a top on a 134 car. Tan De Luxe Quality with a full view. It was installed.

• • •

Q. For whom?

• • •

Mr. Pollock: If it please the Court, I will stipulate that Aro Top Sales has done work for Ford dealers. I believe that will save a lot of time.

• • •

[405] Mr. Wolf: May I have a further stipulation that the work was done on factory—

Q. How do you term it? A. Authorization.

Mr. Pollock: I will not stipulate to that. I would require formal authorization, if there is such a thing.

Mr. Wolf: I believe Mr. Pickard testified yesterday there was no such thing.

[406] Q. Mr. Pickard gave some evidence or testimony this morning about the number of times a top is replaced, or at least his knowledge of it. Would you agree with his statements in that respect? A. I think his testimony was how long would a top last on a car of original manufacture, and I think he said three to four years. I will go along with three years generally as a maximum. The life of a convertible on the road would probably take about [407] five tops.

Q. Do you mean to say that you would consider the life of a convertible 15 years? A. Yes. Because where 1952 Ford sedans today are practically extinct, there are still convertibles around. A convertible is cherished a little longer on the road than a sedan.

The Court: Fifteen years average life?

The Witness: Yes, your Honor. We are still making a considerable number of Model A tops, your Honor.

The Court: Well, the Model A is a rather unique car.

The Witness: Well, we make 1933 Fords, we make 1941 Fords. We still cut them in production, your Honor.

The Court: All right.

Q. You say you still cut the 1941 Fords in production? A. Yes.

Q. What do you mean by that? A. We keep them in inventory. We do not wait for a special order to come in.

[408] Q. In simple arithmetic, then, you would calculate an ordinary convertible might require up to about five tops, is that right, during the course of its life? A. That is right. I would say the Model A Ford probably lasted longer than any of them, but with the advent of the

power tops, tops do wear out more frequently than they did years ago.

Q. There was also testimony offered there was great variation in the life of any individual top depending upon the atmospheric conditions or conditions in which that particular top was located. Could you tell me if there are any variations in the life of a top dependent upon the material that goes into the top? A. It depends on what fabric is used. Of course today they are using a lot of vinyls, which are more or less impervious to atmospheric conditions and sulphuric acids in the air. With the advent of electronic heat sealing, you take a 1955 Chevrolet, the material itself is still good but all the seams fell apart on the top, which constituted a new top, or which made it necessary to replace it. Today with the heat sealing and actually fusing the plastic together at the seams, I think convertible tops will last much, much longer than they did before.

Q. Will you tell me how often it has come to your attention that bows, wiper arms, must be replaced? A. Well, unless the car was wrecked—let me put it this way: under normal driving conditions, the way anybody would own a car and drive it and put their top up and down, I would say that the bows and wiper arms are designed to last for the life of the car.

[409] Q. Barring, of course, accidents? A. Yes.

Q. Will you state for the record what you normally find to be the cause of wear in a fabric top? A. Chafing is one; fading is two; and just normal deterioration because of the elements is three.

Mr. Wolf: Your Honor, we have here a number of tops which were taken from cars before replacement, which I would like to offer to show various conditions of wear, which might require replacement.

Q. Will you take these fabrics, one by one? I don't

know just what they are. Identify them for the Court. A. This could be—this is a 1954 or 1955 or a 1956, which is all the same model, Buick Super, Cadillac or a Buick Roadmaster.

Q. You can't identify it any better than all that? A. Yes, it fits all these models. 1954 Buick Super, Roadmaster or Cadillac.

Q. Will you note where the wear occurs in this particular example? A. This is where a bow would be right here, right in this area here. When the top was folded it would fold and press on this area here. This lower quarter section. This top has been dressed to try and preserve—to get the utmost of the life of this top. The original color was this light tan and it was dressed black. That was only as a last resort before somebody will do [410] something like that.

Q. What is this little cavity over here? A. This is something that appears on all General Motors cars. They call it a drip drain. Instead of following the body and coming in this way, it will drip and drop right into the drain trough.

Q. Do you notice any condition of wear on the body line of this top? A. No, that is in good condition.

Mr. Wolf: Your Honor, I offer this as defendants' exhibit.

[Used top for 1954 Buick Super, Roadmaster or Cadillac, marked Defendants' Exhibit O.]

Q. [Handing]. A. This piece of fabric denotes one of my previous statements that the fabric itself was probably still in one piece. It couldn't be cleaned, but the stitching has just rotted out of the top, which is very prevalent on these 1955 automobiles. This is also a 1955 Buick or Cadillac.

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Q. Will you please identify where you obtained these tops? A. These tops are tops that came into our own trim department for replacement.

Q. Did you personally salvage these as the cars were being— A. Yes, I did.

[411] Q. —as the tops were being replaced? [Handing.]

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Mr. Wolf: I will offer this as a defendants' exhibit.

[Used top for Buick or Cadillac marked Defendants' Exhibit P.]

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Q. Will you please identify that next piece? A. The next is off a similar model car showing extreme fading and cracking of the fabric and the cushion down below is still in relatively good condition.

Q. The flap down below the body line you say is in good condition; is that correct? A. Yes.

Q. While the rest of it is substantially faded? A. Yes. This is the other side of the fabric.

Q. Which is the outside? That is the inside? A. The dark side is the outside. The faded is the outside.

Mr. Wolf: I will offer this as another defendants' exhibit.

The Witness: This is the opposite side of this.

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[412] [Used top for Buick and Cadillac marked Defendants' Exhibit Q.]

The Witness: This is the opposite side.

Mr. Wolf: Could you include this second piece as part of the same exhibit? They are apparently from the same car, left and right [handing to the Clerk].

Q. [Handing.] A. This one is from a 1957 Plymouth convertible. It was removed because the stitching fell apart at the seams. This particular side quarter has a flap extending down inside the body, no cushion; no shingle.

Q. Does this have a wiper arm, this particular model? A. No wiper arm. It is just secured inside the body at the lower quarter section of the—.

Q. What is the original color of this car; can you tell me? A. White.

Q. The lower portion of the flap is the original color? A. Yes.

The Court: I understand this is offered merely to show wear?

Mr. Wolf: Yes, your Honor, conditions of wear. I would like to submit about ten in all.

The Court: All right. I didn't want the offer to be any broader than that without my knowing.

[413] [Used top for 1957 Plymouth marked Defendants' Exhibit R.]

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Q. Will you identify this particular piece? A. This is off a similar model car showing the color of the fabric as against the way it was originally. This fabric was impossible to clean and was replaced because of stitching failure and fading.

Q. Which is the inside and which is the outside? A. The black is the inside and supposedly white is the outside.

The Court: You say that is a 1957 model?

The Witness: 1955 model, your Honor.

The Court: The previous one, you said—

The Witness: Excuse me, 1954.

The Court: The previous one you said was 1957.

Mr. Wolf: Yes, your Honor, the light one.

[414] The Court: Then it wasn't the same model car.

The Witness: No. All these are the same model car except that Plymouth.

Mr. Wolf: I will offer this as Defendants' exhibit.

[Used top for 1954 Plymouth marked Defendants' Exhibit S.]

The Court: What I was getting at, they wouldn't fade that quickly in a year, would they?

The Witness: No, your Honor.

Q. Is this one year old? A. That is 1957, yes.

Mr. Wolf: Your Honor, this is a 1-year old top.

The Court: Are you saying, Mr. Shapiro, that top was white and turned from white to gray in a year?

The Witness: Yes, your Honor, that is the original color. I think it is the—

The Court: I got out of the Plymouth business just in time, I guess.

The Witness: The fine vinyl coating on there wasn't very cleanable. They all have a cleanable top coat on now.

Mr. Pollock: Then the gray is actually dirt?

The Witness: Just dirt—I don't know what it is.

[A brief pause.]

Q. Will you identify this piece of fabric? A. This is an original General Motors top taken from a 1954 Pontiac which is identical in construction to the 1954 Chevrolet. [415] This car in the 1953 Model used a wiper arm, movable wiper arm, that wiped against the cushion and caused a water-tight seal. This top is equivalent to our part No. 232 which goes on the 1953 and the 1954 Chevrolet and Pontiac. In 1954, General Motors, for some reason, changed from a cushion to a shingle, eliminated the wiper arm and installed this stationary bar which is visible on the inside, and it is screwed up against the body well inside and below the belt line. The belt line would be right here. Assuming this is on the other side. It is in this area right here. That is where the shingle is.

Mr. Wolf: We will show some further pictures of this car.

Q. Where did you obtain this particular fabric? A. In our own plant.

Q. Where did you obtain this piece of metal? A. That came out of Goldy's graveyard in Quincy from a wrecked car. It belonged on that piece right there.

Mr. Wolf: I am offering now this piece of fabric as a defendants' exhibit.

[Used top for 1954 Pontiac marked Defendants' Exhibit T.]

Mr. Wolf: Will you include the metal bar as T^1?

[Metal bar marked Defendants' Exhibit T^1.]

Q. Will you note the condition of wear on that model? A. Yes, I would say that that top should have been changed almost a year ago.

[416] Q. What year was that? A. 1954.

Mr. Pollock: What do you mean, it should have been changed?

The Witness: Normally a top in that condition is changed about six months to a year before it reaches that stage. That has gone pretty far. It is pretty shaggy.

* * *

Mr. Wolf: I would also like to offer these pieces of fabric.

Q. Will you identify these, please? A. Yes. This is taken from a 1954 Pontiac, a wrecked car, at Goldy's graveyard in Quincy.

Q. And the bar which is Exhibit T^1 actually came from this particular car? A. Yes. The reason we got the bar from this one, it was a wreck. That one, we had to put it back on the car.

Q. These are two pieces. Will you explain that? [417] A. It just happened to fall apart from the stitching. It goes in this manner. This belongs up here. That is the way that originally attaches, that way.

Q. I would like you to note on this particular exhibit the darkened condition of the flap at the position below the water line as compared with the lighter condition

above. Can you tell me what might have caused this darkness? A. I would say that water getting in from the elements and then the dust settling on the water caused a discoloration of the fabric.

Q. In other words, the water that passed down between the fabric and the body line? A. Yes.

Mr. Wolf: I will offer that as an exhibit.

The Court: That is a car that had no wiper on it?

Mr. Wolf: That had a fixed bar, your Honor. That was a 1954 Pontiac.

The Court: That is the kind of car that had no wiper arm?

The Witness: Yes.

[Used top for 1954 Pontiac marked Defendants' Exhibit U.]

Q. I would like to offer this last exhibit to show the condition of the wear. A. This is a 1954 Buick or Cadillac top. It seems to be in fairly old condition. I don't see any wear spots on it. It was changed because it was fading and it didn't make the rest of the [418] Cadillac or Buick look good with this particular top on it. In other words, it was changed for fading reasons.

[419] Q. Do you happen to recall the specific car this came from? A. I believe it was a 1954 Cadillac.

Q. Would you note the condition of wear below the body line in this particular model, the condition of fading? A. There is no condition of fading below the body line.

Q. In this particular piece of fabric could you tell me whether or not the cushion would have been pressed up against the body line here? A. Yes, it would.

Q. It would be, I presume at the line of clear demarcation which shows the lighter fabric from the darker fabric? A. Yes. That is the top of the tonneau, where the dividing line is.

Mr. Wolf: I offer this as an exhibit.

Mr. Pollock: This is on the car with the wiper arm?

Mr. Wolf: Without.

The Witness: Without.

The Clerk: Exhibit V.

[The above described piece of fabric marked Defendants' Exhibit V.]

Q. Do you know what the usual guaranties are for original tops? A. The factory puts a flat guaranty on all new cars, 90 days or 4000 miles.

Q. That includes the top? A. That includes the whole car.

[420] Q. Does that include Ford and General Motors? A. That is standard practice in the whole automotive industry.

Q. Would you say it is or is not reasonable to require a trimmer to supply his own flap and stitch it to a top that would not have a flap, in order to install, for example, a top on a 1952 to 1954 Ford? A. It wouldn't be feasible on our part to produce an article like that. I would say that maybe 30 or 40 per cent of the accounts we sell are not trimmers. They are only installers. They don't even own a sewing machine.

Q. Could you please tell us what your fabric tops sell for, the particular price range? A. We sell them from $13.95 to $40, depending upon the quality and the quantity discount that the customer gets. We have—well, our lowest price is $13.95 less 5 per cent.

Q. That includes the entire kit that you have shown us? A. That includes the top, the rear curtain, the trim and the tacks and tips, and so forth.

Q. Do you have any knowledge as to what the folding bow mechanism costs? A. I believe it is $415 for a Ford assembly plus $90 for a motor.

Mr. Pollock: Could we clarify: Whose price is that, your Honor?

The Court: Yes.

[421] The Witness: That is the price from the Ford Motor Company to an authorized Ford dealer.

Q. Do you have any knowledge personally of the cost of the wiper arm? A. No, I do not.

Q. We previously asked you about the scope of the trade.

Mr. Wolf: I would like to offer into evidence several volumes of the Auto Trim News, a trade publication. I believe my Brother counsel has stipulated that they may be so offered.

Mr. Pollock: We have stipulated, if I am not mistaken, that they may be offered merely for the purpose of showing that there is such a thing as an Auto Trim News and such a thing as a replacement top industry. These are not intended to be prior art or otherwise germane to this suit, is that correct?

Mr. Wolf: It is correct, as far as I know. I would offer these three.

The Clerk: W, X, and Y.

[Three volumes of Auto Trim News marked Defendants' Exhibits W, X, and Y.]

* * *

[423] Q. Have you sold directly to General Motors? A. Yes, we have.

Q. These purchase orders, they were received from General Motors, that I now hand you? A. Yes.

Q. Would you identify them? A. These are purchase orders from the Cadillac Motor Division, the New York Branch, which is a factory-owned subsidiary. The billing is through General Motors. The checks are made out by General Motors when it is paid. These are for replacement tops to their factory branch. One purchase order, No. 9180, September 25, 1957, calls for a black top with pads and full view window for a 1953 Cadillac. This No.

9432 calls for a top for a 1955 Cadillac. This 8152 calls for a 1954 Cadillac, and this 8904 calls for a 1954 Cadillac. In parentheses it says "Make up of coated fabric, same materials as used on 1957 Cadillacs."

Q. These purchase orders, are they typical of those you received from Cadillac? A. Yes. We have loads of those in the file.

Q. How far back do these purchase orders go? A. I would say they go back to 1953 or 1954?

• • •

[424] Mr. Wolf: I offer these as an exhibit.

The Clerk: Exhibit Z-1, 2, 3, 4.

[Purchase Orders, Cadillac to Aro, marked Defendants' Exhibits Z-1, 2, 3, 4.]

• • •

[428] Q. Now, as a result of this correspondence, what did you sell to the Ford Motor Company?

The Clerk: Exhibit AA.

[Letters concerning Ford Motor Company marked Defendants' Exhibit AA.]

A. We sold a cover for their new Ranchero. That was a combination truck and car.

Q. Just one? A. No, we sold many of them.

Q. To whom were they sold? A. Well, the Ford branches requested in several—in all instances, some requested 250 pieces, some requested 125, depending on the size of their area and how many dealers were under their authorization. They in turn mailed them to the dealers and requested that they order directly from Aro.

Q. I offer you one final purchase order from Ford Motor Company: Will you identify it? A. This is dated May 5, 1955, ten pieces convertible back curtain assemblies, and the price. This is a Ford Motors Company purchase order, original.

Q. Were those the ones you referred to previously?

A. This is the one on the curtains for the Somerville assembly [429] branch.

Mr. Wolf: I will offer that also as a defendants' exhibit.

The Witness: I originally said twelve; it is ten.

[Purchase order from Ford Motor Company dated May 6, 1955, marked Defendants' Exhibit BB.]

Mr. Wolf: Your Honor, I would like to offer in evidence at this time the agreement with General Motors and the agreement with Ford which were previously submitted with the motion for summary judgment, and I believe my brother counsel has stipulated they may be so offered. I believe that they are now in the possession of the Clerk.

The Court: They may be marked as CC and DD.

[Agreements with General Motors and Ford marked Defendants' Exhibits CC and DD.]

Q. Am I correct in understanding with respect to Ford, the only cars that had wiper arms in the body of their construction was the 1952, 1953 and 1954 Ford, Mercury and Lincoln, and the 1955 Lincoln; is that correct? A. Yes.

Q. With respect to General Motors, all the cars from 1950 to 1953 and what was it in 1954? A. There weren't any.

Q. All the cars from 1950 to 1953; inclusive. And none of those cars, as I understand the testimony, had inleaning fins. They all had cushions? A. That is correct. [430] Q. Except for the 1954 Ford. A. That didn't have a leaning in fin.

Q. I am sorry. It didn't have a cushion, either? A. That's right.

• • • •

The Witness: Some of the late 1953 General Motors had shingles instead of cushions.

Q. Which of those? A. It was the Oldsmobile, Buick and Cadillac and—I shouldn't say Chevrolet. I am not too sure on that.

Q. Do you know of any instances where General Motors used a cushion to effect a seal and then discontinued it, and then continued it again? A. Yes. The 1954 Oldsmobile, Buick and Cadillac had a cushion originally. Then it was discontinued and then they went back to it in 1955.

Q. Those, you say, did not have wiper arms? A. That is correct.

Q. Could you tell me something with respect to the time involved in obtaining a replacement top through a Ford or General Motors authorized dealer as compared with going directly to a trim shop or a company with whom, for example, you might deal? [431] A. I would say it would be a matter of weeks and possibly months, depending on the vintage, the age.

Q. Supposing, hypothetically, I had a car with a fabric top that needed replacement, say a 1952 or 1953 Ford, and I went to a Ford authorized dealer, would you know how long it might take to get an original top from the Ford Motor Company? A. I would say a 1952 to 1954 Ford, it would run, I should imagine, about four weeks to a month and a half.

Q. Would you tell me something with respect to the 1950 to 1953 General Motors car, as to how long it might take to get one from the General Motors dealer? A. I would imagine it would be about pretty nearly the same thing.

Q. Supposing I took the same car to a trimmer who would be buying your merchandise? A. If he had the top in stock, you could have the car in about three hours.

Q. How long would it take him to get the stock? A. Normally, if he was local, he could pick it right up. If he was out of town, just as long as the mail would take to get to him. I might add, Mr. Wolf, that Chrysler Motor Division replacement top section for factory replacement tops, they only employ one girl to handle the

whole country for replacement tops, and that is the scope of replacements that are requested from the original factory.

Mr. Pollock: That is Chrysler, you say?

• • •

[432] Q. Have you ever been requested, since notification of the existence of the Mackie patent, by anyone, to put cushions into your fabric tops? A. Yes, I have.

Q. When and under what conditions? A. When we stopped putting the cushions in it was right after that that we did get some letters from our distributor in New York and we have had several requests throughout the country complaining to us that why don't we use cushions the same as the original. But we never went along with them and put them in. We just said that is the way we manufacture them and that is the way they would have to be.

• • •

[433] Mr. Wolf: I can identify it by date. I would like to offer in evidence letter dated April 26, 1954, from the firm of Moore & Hall to Ezekiel Wolf.

Mr. Pollock: That was originally my Exhibit G.

The Court: I don't care what it was originally marked so long as it is now marked.

Mr. Wolf: It is attached, I believe, to Plaintiff's Request for Admission No. 5; is that correct? I would also like to offer into evidence the letter dated May 8, 1954, from the same firm to Ezekiel Wolf.

The Court: Strike out what I said a minute ago. I do care, and those do not need to be given any new exhibit numbers, since they are already in the file.

[434] Mr. Pollock: The original exhibit, Exhibit G, on the first letter mentioned. The second was Exhibit I, on the second letter mentioned.

The Court: Very well. Those won't be exhibits and are called to my attention and are in evidence.

Mr. Wolf: I would like to point out the letters preceding it, which they were a response to, have been offered in evidence as Plaintiff's Exhibit 9, I believe.

The Court: All right.

* * *

Mr. Wolf: I would also, your Honor, like to offer into evidence the entire deposition of Harold Shapiro, taken February 20, 1957, which has already partially been offered by my brother, together with the photographs which form a part of that deposition.

* * *

The Court: All right.

* * *

[437] Q. I am speaking about the right-hand side with the wiper arm removed. We raised and lowered the top. Before we raised and lowered the top we removed the wiper arm, and the fabric sagged in, after you removed it further than its location, before you removed the wiper arm. A. No. I think it sagged in after we raised and lowered it and raised it.

Q. Of course that is on the record. But it did sag in after the wiper arm was removed, is that correct? Is that your recollection? Is your recollection the same as mine? A. Yes.

Q. My point simply was, what do you attribute the cause of that to? A. Well, I would say probably the wiper arm did press the fabric to a certain extent.

* * *

[439] Q. With respect to the use of your kits, I would like to once again ask you, because I am not sure whether it was asked in this form, whether you know specifically the use of the kits once they are purchased from you? A. I couldn't swear to the ultimate use. It is naturally

intended, it is for a particular car, but once it leaves our plant or is shipped out we have no idea what anybody does with it. We assume it goes on as intended.

Q. I understand you said you sold principally to jobbers.

A. Yes.

[440] Q. And presumably selling in bulk to them, is that correct? A. Yes.

Q. From that point on you do not know how they distribute their wares? A. That is correct.

Q. We have been speaking of a 1954 Pontiac and a 1954 Chevrolet. I am going to show you some pictures and ask you to identify them in connection with that discussion that we had [handing photographs to the witness.] Would you identify those, please? A. This is a 1954 Chevrolet. Mr. Wolf and I were driving along and saw this car sitting at the curbstone, and just got out of our car and decided to take some pictures.

* * *

A. [continuing] Picture 1 identifies the car. We don't know who it belongs to.

* * *

[441] Picture 2 shows the shingle resting on top of the belt line of the body. Incidentally, this happened to be an Aro top that was on this car.

Picture 3 shows the stationary bar in lieu of the wiper arm, which would be located a couple of inches upward.

Q. I would like to have you mark that or indicate "stationary bar." A. Yes. [The witness complies.]

Q. Will you also indicate where the trough is on that particular model, looking at Picture 3? A. Yes. [The witness complies.]

[442] Q. I presume that that bar is rigidly connected to the body of the car; is that correct? A. Yes, it is welded on.

Q. And it does not, presumably, go up and down with

the folding bow mechanism; is that correct? A. No, that bar is secured permanently.

Q. Can you tell us about how far above or below the body line that is? Perhaps if you look at photograph No. 5 you could indicate by making a line where the body line would normally come. A. The stitching and cement line above the stationary bar is where the wiper arm would normally go in that particular car. That is the stitch line for our shingle.

Q. That is that light mark that goes across the photograph above that fixed bar; is that correct? A. Yes. We pre-assemble our parts with cement and the light hit that cement and reflects.

Q. Will you draw a line on the photograph where the body line would be? A. The body line would be here.

Q. Will you mark it out on the side "body line", on the frame? A. [Complying.]

Q. Will you identify photographs 6 and 7? A. Photograph 6 shows a picture taken from the open rear curtain on an angle to show the location of the flap secured [443] down on the body, on the trough, showing the fixed bar in position well below the body line.

Q. In the photograph it looks as though it is connected to that roughly triangular shape. Is it? A. No. That triangular shape is part of the folding mechanism and the bar fits flush against the fabric and is hidden by this folding mechanism.

Q. Will you identify Figure 7? A. Figure 7 is a little more of a closeup showing the stationary bar well below the belt line of the car.

Q. What top of yours fits this particular model car? A. Our part No. 232.

Q. What other car does it fit? A. It fits the 1953 Chevrolet and Pontiac, which is equipped with a wiper arm and a cushion.

Q. The operation of this 1954 model, could you tell me whether or not the fabric is interfered with in any way by this particular fixed bar? A. No.

Q. In its raising and lowering? A. No.

Mr. Wolf: Your Honor, I am offering these seven photographs in evidence as Defendants' Exhibits.

[Seven photographs marked Defendants' Exhibits EE-1 through EE-7.]

Q. During the tests we conducted downstairs, you secured, at the end, a fabric 134 top to the outside body line of the car? [444] A. That is correct.

Q. Can you tell me when this normally—can you tell me whether or not this was done by trim shops? A. It is done. It is done by some shops, I wouldn't say every time, but it is a practice in the industry. Not a common practice, but it is a practice.

Q. Have you found the flap—securing a flap below the body line aids in any way in creating a seal at the body line?

Mr. Pollock: I didn't hear the question.

Q. [Continued] Did you find securing the flap below the body line aids in the creation of a seal, in any way, at the body line? A. Yes.

Q. In what respect? A. By holding the material out taut on a downward motion.

• • •

[446] Q. What is the importance, if any, of attaching the fabric below to a trough in order to effect a seal above? A. No importance.

Q. What is the function of attaching the fabric to a trough below? A. As a guide for any water that got in.

Q. In other words, you would say that the importance is merely for water which has already passed the seal; is that correct? A. Yes.

The Court: Do you mean by that that the attaching of

the fabric below does not affect the width of the opening between the belt line of the car and the fabric?

[447] The Witness: No, your Honor.

The Court: You do mean it or you don't mean it?

The Witness: I mean it doesn't affect the opening.

The Court: Didn't your demonstration this morning show that it did?

The Witness: No, your Honor. The fact that the opening was a little bit larger was, the material loosened up. The material had elongated and torn on those prongs and we couldn't pull it down tight enough.

* * *

[448] The Witness: The way we have installed tops and seen them installed throughout the country, it doesn't make any difference which position the wiper arm is in, your Honor.

The Court: That does not affect, in any way, the opening between the belt line of the car and the fabric?

The Witness: It possibly could affect the distance between the belt line and the fabric—

The Court: If you mean it doesn't make any difference, you are concluding any ultimate difference, and not any physical difference?

The Witness: That is correct.

* * *

Q. I am directing my question to taking specific instances, and I am directing my questions to the 1952 Ford having an Aro top on it, presuming that the wiper arm is secured in the location [449] recommended by the factory, which I understand is 3/8 of an inch from the body line, if we have a 134 top on it secured to the trough and then we remove the fabric from its secured position on the trough by releasing it from those prongs, would it in any way affect the space between the fabric and the body line? A. No.

Q. If—

The Court: And the reason for that is what? Because the space is fully determined by the wiper arm?

The Witness: No, I think it is the longitudinal—the strain is on a perpendicular, the side quarter and the trough, the material would fall in a straight line and the longitudinal strain of the cloth being taken on the outside, and the window flap being screwed in place on the other side, but putting a horizontal strain wouldn't allow the fabric to fall in. It would be on a straight line.

The Court: Although I thought the strain was vertical.

The Witness: It is also horizontal because it is attached at the rear window and where it is tacked on the belt line.

The Court: When counsel was inquiring about attachment, I thought he meant the bottom attachment to the trough.

Mr. Wolf: I am presuming it is still attached forward and rear, your Honor.

The Court: I thought so, too. Maybe I misunderstood.

Mr. Wolf: I believe the witness' answer was that the [450] wiper arm itself doesn't solely determine this position because the forward and rear securing areas still hold the fabric in some relative position.

* * *

Q. Assuming we had a 1952 model car with an original top with a cushion and we released the fabric from down below, what effect would that have on the seal? A. No effect.

* * * * *

[451] Q. Mr. Shapiro, I believe you testified that your company manufactures a part #224. Will you please tell us what automobile that part number is for? A. 1950, 1951 and 1952 Oldsmobile 88, Buick Special, Chevrolet and Pontiac.

Q. Those cars have wiper arms, of course? A. Yes, they do.

Q. I believe you also manufacture a part #223? A. Yes.

Q. Will you please tell us what that fits? [452] A. That fits the 1949 Oldsmobile, Chevrolet and Pontiac. Excuse me. On the previous statement, it doesn't fit the Buick Special. I made a mistake.

Q. I take it that the 223 model is designed for cars without wiper arms? A. Yes, it is.

Q. Can you tell us the difference between 223 and 224? A. The actual fit of the top could be interchanged, the only difference being in the lower quarter section. The frame structure, the bow structure, the folding mechanism, is practically identical, and the 223 could be put on a 224 car.

Q. Do you mean the top numbered 224 can be put on a car for which you would normally design a 223 part; is that right? A. Yes, they could be interchanged either way.

Q. What modifications would you have to make? A. By bending up the lower flap and installing fasteners in the top itself, the fasteners being on the body originally for the boot.

[453] Q. Is this the same type of modification you showed to us in the demonstration yesterday? A. Yes.

Q. Would the 224 top then appear similar and be installed in a similar manner as a 223? A. The only difference being on the 223 there is an inverted lip that interlocks with a chrome —what is the opposite to invert?

* * *

Q. Would this difference be of any significance as far as the trimmer is concerned? A. No.

Q. I have here a copy of your deposition, taken February 20, 1957, and I invite your attention to Question 269, which reads:

"Q. Does the idea of having a section of fabric coming down inside the car and actually fastening on

part of the car, for instance, adjacent the trough, is that the important thing?

A. That is correct."

Could you explain what you meant when you spoke about that, when you gave that answer?

• • •

[454] A. The answer at that time was "That is correct." Since then we have conducted tests and have checked with shops in the field and have found it was not necessary to attach the lower part of the flap to the trough, that if it was left loose it meant absolutely no difference in appearance or things of that nature.

• • •

[457] The Court: Hasn't one of the plaintiff's witnesses testified if there was no wiper arm, there was no infringement, in his opinion?

Mr. Pollock: I don't recall that exact testimony. It is possible.

The Court: It came pretty close to that.

Mr. Pollock: It could very well be.

The Court: I was thinking of Mr. Pickard, although I am not sure.

• • •

The Court: Mr. Pollock, let me ask you, if I misunderstood that witness, perhaps— You wouldn't necessarily be bound by what he said, anyhow—what is your position? Would you say that a top which had no wiper arm used in connection with it could be an infringement of your patent?

[458] Mr. Pollock: I would say, your Honor, that a wiper arm or something equivalent should be provided.

• • •

[459] Q. Did you ever have occasion to manufacture a fabric top for Hillman-Minx before 1949? A. Yes, we

make a top for a 1948 to 1955—1954, inclusive, and another one from 1955 to 1957, inclusive.

[460] Q. Could you describe the rear quarter section of the 1949 and earlier Hillman-Minx? A. Yes, the side quarter section came very similar to our present day cars. It had a flap extending approximately 4 or 5 inches into the lower tonneau adjacent to the rear quarter window. The length—or the width, I should say, is approximately 3 inches. Then it is shaped and tacked on the outside of the car. About 4 inches deep and about 3 inches wide, the flap extends down into the tonneau and is connected to a hook arrangement located on the fender well by means of an elastic band stitched to the lower end of this flap and is secured in that clip.

Q. In both of these structures, how far away, in a properly installed fabric top, would the fabric come from the body line in this flap area? A. It would be touching the body line.

Q. Supposing you had some seepage of water passing between the fabric and the body line in this area, where would the water go? A. Down through the fender well and out through a drain in the bottom of the car.

* * *

[461] The Court: In the case of the Hillman, to raise and lower the top, was it necessary or desirable to unfasten this flap on the inside of the car?

The Witness: No, your Honor. It is an automatic device. That is possibly the purpose of the elastic, to give and then retract to its normal position.

Q. You mean it was almost permanently secured in that area? A. Yes, it was.

* * *

[462] The Clerk: Defendants' C through J are now in evidence.

[Photographs formerly marked Defendants' C through J for Identification, received in evidence.]

Q. I am handing you a series of five photographs, and I would like to have you identify them. They have been consecutively numbered.

Mr. Wolf: I have here a duplicate set, if your Honor would care to see them [handing photographs to the Court].

Q. Could you identify those photographs? A. These photographs were taken about two weeks ago at the Aro Top Sales installation room of the 1953 Ford convertible, part No. 134.

Q. Could you please tell us the circumstances under which these pictures were taken? A. The circumstances under which these were taken was to prove that the wiper arm or the fastening down inside the tonneau would have no consequence as to the function or appearance or the net result of this convertible top.

* * *

[463] Q. Will you please go on and indicate more specifically the type of car and whose car was involved in this test? A. This car was a car that we borrowed from a dealer. I have [464] one correction to make. This is not an Aro Top on here. I did make an error there.

* * *

Q. What kind of top was it? A. This top is a custom made top, utilizing the original cushion that originally appeared on the top made by the Ford Motor Company.

The Court: How is that going to help us?

Mr. Wolf: Your Honor, it will show that an original cushion, that a seal will still be effected with an original cushion, even when you release the fabric from the lower portion. In other words, your Honor, it will show—

* * *

[465] Q. Would you explain the photograph in sequence,

please? A. Photograph No. 1 shows the top the way it was received by us on the car in its original state. Photograph No. 2 shows the flap down below being released from the prongs and completely disengaged from the body of the car.

Q. In Photograph No. 2 there appears to be some extra fold of cloth above the wiper arm. Could you identify that, please? A. Yes. That is the cushion as made by the Ford Motor Company, so it is not visible on the outside while the cushion is on the inside.

The Court: Does the cushion usually pucker up like that?

The Witness: Yes, your Honor.

Q. Would you identify Photograph No. 3? A. Photograph No. 3 shows the top in a partially recessed position and denotes that the seal between the wiper arm and body is not changed at all.

Q. Could you tell us whether or not this photograph depicts [466] the top in a partially raised position after being lowered all the way and then up again or just having gone down partially? A. This top was recessed completely, and this is in the partially raised position.

Photograph No. 4 shows the top completely raised and locked in position and compared to the original status of the car, it is in the identical same position.

Photograph No. 5 shows the exterior view as compared with Photograph No. 1, showing absolutely no outward change in appearance.

* * *

The Clerk: FF-1 through 5.

[Photographs marked Defendants' Exhibits FF-1 through 5.]

Q. Can you recall what the space was between the fabric and the body line before and after you conducted these tests—pardon me—before and after you raised and lowered

the top with the fabric removed? [467] A. There was a space of approximately an eighth of an inch with the cushion, and that was before, and the same space prevailed after the demonstration.

Q. How much of a space remained before you removed the fabric from the trough, from its connection to the trough, and after you replaced it? A. There was no difference.

Q. Was there an eighth of an inch opening also? A. Yes.

* * *

[471] Q. Would you consider, in your experience, the replacement top trade to be competitive? A. My answer was, very competitive.

Q. Do you have much local competition? [472] A. Yes. Every individual shop is a competitor. Our contention has always been on a national scale we may not have too many competitors but in your local area it is pretty hard to beat a man that can work out of his garage in the backyard, and so forth.

* * * *

Q. You mean you never increased your prices—. I see. Outside of loss or damage through accident, have you ever seen a wiper arm or a bow mechanism fail before the car itself was perhaps considered at the end of its useful life?

* * *

A. Under normal usage of a car, I would say that the metal bows and wiper arms will last the life of the automobile.

* * *

[473] Q. You might indicate why the General Motors car—why, in General Motors cars the wiper arm is missing in one out of fifteen. A. It is connected on the forward end of the pillar post on a bolt that actually pivots every time the top is raised and lowered. The rear section is only pushed into a slot. If the forward bolt from

raising and lowering the top, isn't set with the small [474] recessed screw, they have to hold it in position, it will unwind and fall off and fall down into the fender well section, whereas on Fords the wiper arm is riveted to another piece and put through with a cotter pin in there, with two bolts on the rear end of the wiper arm, and it is practically impossible to fall off.

Q. Then in connection with the General Motors cars you would consider it perhaps the failure of the bolt rather than the wiper arm that causes the wiper arm to be missing? A. That is correct.

* * * *

Q. Those wiper arms that you do salvage or you have seen in the fender well, can you tell us what condition they appear in? A. In perfect condition.

* * *

[475] Mr. Pollock: This is the deposition of February 20, 1957. First, in regard to the Hillman-Minx and the like, I invite the Court's attention to pages 70 and 71 of this deposition. Reading from 290 Q:

"What was the first automatic top you had or which you manufactured which had a flap which was permanently attached to the inside of the car? A. 134."

* * *

[476] "291 Q. That was for 1952 Fords. Didn't you make— A. I mean 224.

292 Q. For the 1950 General Motors car? A. I mean 224.

293 Q. That was the first top fabric which you manufactured which had the flap which extended inside the car and was permanently fastened there to give you an automatic top? A. That is right.

294 Q. Do you know of any other top automatic in nature which had a flap extending inside the car and

fastened to the interior permanently to give you automatic operation? A. No.

295 Q. Prior to 1950? A. No.

296 Q. You don't know of any others? A. No."

* * *

[478] The Court: Not at the moment, but—this is merely inquiry, rather than any view on my part—but isn't the significance of the wiper arm that it holds the material over that way in case the car is designed so that it doesn't need to push it? It still has an effect?

[479] Mr. Pollock: I think that is definitely one of the points in that it restrains inward motion of the fabric beyond a certain point.

The Court: That is what I mean.

* * *

[480] *Re-cross-examination by Mr. Pollock*

* * * *

[486] XQ. Mr. Shapiro, yesterday you were discussing the prices of your tops. Do you recall what your testimony was in that regard? What were the prices you said you charged for your tops? A. We charge, our lowest price is $13.95 less 5 per cent, and the highest price we charge for the exceptionally high quality fabric, and so forth, would be about $40.40.

XQ. That you are charging whom in this regard? A. Well, the $13.95 would be the price of the top to our jobbers, and the $40.40 would be a price to a trim shop. The $32.90 is the price the jobber would pay for the highest price top that he would buy from us.

XQ. So that the trim shop pays about $8 more than a jobber, is that right? A. The jobber buys it for $13.95. The trim shop would pay anywhere from $18 to $22, depending upon the jobber's markup, and what section of the country it is, with freight, and so forth.

* * *

[487] The Court: I mean a customer. Suppose I am a handy [488] man with a screwdriver and I think I can install my own top, Mr. Shapiro. I live here in Massachusetts. What can I do to avoid paying for the labor?

The Witness: Well, you could go into a trim shop. He would probably work on a lower price top, that would cost him approximately $16.70, and he would probably charge you somewhere around $21, and make $5 on it.

XQ. How about the more expensive top? A. I think he would prorate it up. On a top that would cost $40, he would probably charge $55 or so.

* * *

[489] The Witness: You are charged $15 plus the price of the top.

The Court: $55, and he charges me then about $70.

The Witness: That is correct. He could install that top in approximately an hour and a half to two hours, depending on whether he was any good.

The Court: I don't care how long it takes him. I am interested in what I have to pay. It would be about $70 for the top that you got $40 for?

The Witness: Yes. I think the price on a car like that would be somewhere around $70.

* * *

[490] XQ. Do you recall that one of the defendants, Mr. Hamlin gave [491] a deposition in this proceeding? A. Quite a ways back, yes.

XQ. Do you recall he stated at that time that the cost for the complete folding bow mechanism and linkage and arrangement of the bow mechanism of a new 1957 car at list price is $375? Would you like to see this affidavit? A. That is for a 1957. There may be simpler arrangements in it.

* * *

XQ. You said you did not know how much a wiper arm cost? A. No.

XQ. Didn't you ask these people when you called them up on these other prices? A. No.

XQ. Well, could you explain why you neglected to ask them this? It appears to be pertinent. A. A couple of days before this trial started I went down to a Ford dealer, I went down to an Oldsmobile dealer, and I asked to see their shop manual, the book that is used by their mechanics as a bible, showing how any possible part of the car can be adjusted or fixed or repaired, and in no instance have I found any mention whatsoever in Ford's manual or the General Motors manual in any way relating to a wiper arm adjustment, cost or what-have-you. I think it is probably part of the complete frame assembly. I imagine the individual part can be bought. [492] It wasn't available to me at the time.

* * *

XQ. Would you be surprised if I told you that the wiper arm cost in the order of a dollar?

* * *

A. I imagine it wouldn't be much more than that.

* * *

[494] XQ. Is it your statement that every Aro top comes in a package with these instructions? Is that accurate? A. Yes. But the instructions, the reason we dropped that out of our subsequent catalogues is because the instructions became null and void, were not pertinent to the 1953 and 1954 installation instructions.

* * *

XQ. Isn't it true that subsequent to this time you started issuing instructions separate from the boxes? A. Only on —at a time when the cars became different than conventional installations.

* * *

[495] XQ. So after you dropped the instructions out of some of the boxes, you did prepare an instruction manual for distribution to the public? A. Yes.

XQ. You also say you gave instruction at some clinics? A. Yes, we did on the 1955 Fords and 1956 Fords.

• • •

[499] XQ. Well, doesn't the wiper arm provide a limiting position for the fabric with regard to the belt line? A. Only as far as if you press the fabric from the outside.

XQ. If you try applying a force to the outside it can't go in beyond the position of the wiper arm? A. Yes.

• • •

XQ. So that, as I understand your latest testimony, the wiper arm does restrict the inward motion of the fabric? A. Yes, if outward pressure is applied.

• • •

[500] XQ. Now, as I recall your testimony, you stated that in your top fabrics you tried to get around a 3/8 of an inch gap; is that correct? A. We don't try to get any. It is just the way the material goes on.

XQ. I see. You say the provision of a gap is of value in reducing chafing. This is your testimony? [501] A. That is one of the features.

XQ. Is the 3/8 of an inch dimension a vertical dimension? A. We don't make a top to fit a particular dimension. We just put it on the car and put it on, and where it falls, it falls, and in practically every instance there has been a space of between 3/8 and 1/2 of an inch on all Aro tops.

XQ. Would you consider if the space were in the order of 1/4 of an inch it might be better from the point of view of operation? A. It wouldn't be better or worse.

XQ. 1/4 inch and 3/8 of an inch are the equivalent, in so far as you are concerned? A. Well, we wouldn't make

adjustments in the car to fix that space. The way it goes on the original frame, that is the way it stays on.

XQ. I am just asking you about a top, if it had 1/4 inch would it be better for the operation of the car than a 3/8 inch gap? A. I wouldn't know.

XQ. I suppose the same answer would apply if I were to ask about 1/8 of an inch and 3/4 of an inch gap? A. If the eighth was true all the way down, it possibly could. If you get such a tolerance of 1/8 of an inch it is possible it would be touching in some areas and cause chafing.

XQ. Would you say it is better or worse? A. I would say that from my own personal viewpoint, if I owned a car and had a top put on, I would like a space to be more than [502] an eighth of an inch.

• • •

XQ. On these exhibits which you identified this morning as FF-1 through FF-5, and I invite your attention to picture FF-4, where the fabric is loose below the belt line— A. Yes.

XQ. Is that fabric lying outside of the trough now? A. It is lying outside the trough but possibly—that was laid outside the trough for this particular demonstration.

XQ. If the car were actually in use in this condition, any water tending to get past the cushion would run along the fabric in that region and drip outside the trough; is that correct? A. Yes.

• • •

[503] XQ. You said the shingle sets half an inch above the belt line; is that correct? A. It is normally designed for that purpose, yes. Half or three-quarters of an inch.

XQ. That is actually where you drew the white chalk line? A. Yes.

XQ. As a matter of fact, isn't it quite normal for the shingle to set right on the belt line? A. The fabric that

the convertible tops are made of in the past have been more or less of a stretchy piece of fabric, especially in the lower quarter section where it is biased. It is sort of on a diagonal, and consequently more stretch is available in that area than it would be if it was cut on the straight. It is possible if a strong trimmer could pull down tight enough, he possibly, through an improper installation, could pull the shingle down to meet and overlap the body line on the outside.

* * *

[504] XQ. As I understand your answer, you say the shingle did fit on the belt line at least part of the region; is that correct? A. I did not say that. I said it raised up on the forward edge.

XQ. Where was it on the rear edge? A. On the rear edge it was almost on the belt line, extending to the outside of the belt line. Not in between the belt line [505] and the wiper arm.

XQ. You say it was on the belt line? A. It was close to the top of the belt line. In an extending manner outside the body.

XQ. You say also it sat up, you say an inch, in the front? A. Possibly an inch.

XQ. That didn't impair the waterproofness of it? A. It didn't impair the direction of water. It still directed the flow of the water to the outside of the car.

* * *

XQ. Do you recall observing where the shingle sat on that car? A. It sat very close to the belt line, also extending to the exterior of the car.

* * *

XQ. I am not asking you that. Do you see the shingle? A. Yes, I do.

XQ. Where is the shingle actually located in this car?

A. The shingle is resting on top of the belt line at the rear end, above the belt line on the front.

* * *

[506] *Redirect Examination by Mr. Wolf*

* * *

[507] Q. You testified just a moment ago if the fabric were released [508] from the trough, the water would drop outside of the car, the water that rolled down the fabric. Could you please tell me just where the water would fall into? A. On what kind of a car?

[509] Q. Well, I think we specified we are talking about a 1953 Ford.

* * *

A. Yes. The water would follow the fabric down and go between the body, the inside edge of the body shell and the fender well and subsequently out through a drain at the bottom of the car.

Q. You also testified that as to the relative cost of the fabrics and installation involved. Could you please tell us what the least expensive installation an individual could expect on, for example, a 1952 to 1954 Ford?

* * *

The Court: Go ahead.

A. I would say it is common practice, at least in the city of Boston, Providence and Portland, Maine, where things are competitive, there are installation tops of that nature for $30 complete, labor and materials.

Q. Is that with one of your $13.95 tops? A. Yes. They don't pay $13.95. They pay more.

Q. You mean the trimmers pay more? A. The trimmers pay more.

* * *

[512] Mr. Wolf: Your Honor, I should like to offer in evidence certain Defendants' Requests for Admissions and the Answers as well as Interrogatories. With your Honor's

permission ' would merely give the Interrogatory numbers and the Requests for Admission numbers, and perhaps that would suffice.

The Court: All right.

Mr. Wolf: Interrogatories 1 through 6, 8, 10, 12-A and 12-B, 18, 22, 24, 25, 26, 88 and 89, and the Answers thereto. I should also like to offer in evidence Defendants' Requests for Admissions 7, 8, 9, 12, 13, 26, 27, and the Answers to 27-MM and VV and 43.

• • •

[513] PETER JOSEPH BROSENS, Sworn

Direct Examination by Mr. Wolf

Q. Mr. Brosens, will you please state your name and address? A. My name is Peter Joseph Brosens. My address is 34 Dundonald Road, Belmont, Massachusetts.

Q. Would you please give us your present occupation? A. I am now an Instructor in Mechanical Engineering at the Massachusetts Institute of Technology, and consultant for the Air Force Missile Development Center at the Holloman Air Force Base, New Mexico.

• • •

[518] Q. Have you ever made any study of convertible tops of, say 1952 to 1954 Ford motor cars and cars in the same period of time? A. Well, for the purposes of my presence here, I have conducted some studies and I have paid particular attention to the principles involved and the functions of the components of these structures. I have not tried to acquire very thorough knowledge of the exact sizes and shapes of the structures involved in these constructions.

Q. Do you understand the function of the constructions which you have seen? A. Yes, I do.

• • •

[519] *Cross Examination by Mr. Pollock*

XQ. How old are you, Mr. Brosens? A. I am 24 years old.

XQ. When the 1952 Ford came out, you were—that was six years ago—you were about 18; is that correct? A. That's correct.

XQ. I assume you are going to be discussing certain prior art patents cited by the defendant, some that go back to 1939? A. Which I have seen recently, yes.

XQ. And in 1939 you were— A. 6 years old.

• • •

[520] The Court: You have no familiarity with the convertible tops field except a paper familiarity; is that a fair statement?

The Witness: That's right. I can study them on paper.

• • •

[521] XQ. Yes. Could you give me an estimate of the total time you actually spent looking at convertible automobiles for the purposes of preparing yourself for the testimony here? The total time? A. I would say five hours.

XQ. And you had no other experience in the convertible automobile [522] field other than this? A. No, I haven't.

• • •

XQ. Have you ever actually done any work in the automobile field? Any work? Have you ever worked for anybody that does any work for automobile manufacturers? A. No.

XQ. Are you familiar with the problems which automotive manufacturers encounter in the convertible top field? A. Yes, I think so.

XQ. Does this familiarity arise out of some experience other than your paper reading? A. Yes, I have tried to—I have asked a number of questions, mainly to Mr. Shapiro, to understand what the problems are of the trim makers. I have sometimes asked him why something is not done in

anotner way, and questions of this kind, to understand what, practically, the construction of the top is.

• • •

[523] XQ. And his answers have now become a part of your sum total knowledge; is that correct? A. Yes.

XQ. So that when a certain problem comes up and you testify on it, it may be because of what Mr. Shapiro told you about the situation? A. Yes.

XQ. Have you had any other experience in the convertible top field or in the linkage field other than the experiences we have discussed so far? A. Yes. I would say that I am familiar with the problems in the linkage field. I can remember two seminars in the linkage field given at M.I.T. which have familiarized myself with the different kinds of linkages.

XQ. Were these automobile linkages? A. I would say these are quite more sophisticated linkages than the ones I have seen in these structures.

XQ. These seminars, then, did not apply to automobile linkages? A. They might have. They were of an abstract nature.

• • • •

[524] XQ. Your total experience with linkages was from these two seminars, as I understand it? A. Oh, no. I mean in the course of my own training I have encountered linkages, of course. There is a one-term course at M.I.T. which is practically—we practically face problems with linkages and gears.

• • •

[526] *Redirect Examination by Mr. Wolf*

Q. I might ask you, have you ever received instructions from me with respect to the interpretation of patents? Have I outlined what the problems are that are involved? A. You have. And of my own curiosity I have asked questions with regard to the law.

[529] The Court: I would say, without in any way meaning to reflect upon the witness, that he is what I would call in many respects a home-grown expert. He learns from counsel for the defendant and he learns from the defendant the things that he will need in order to testify, things of which he has had no previous experience. I will hear you, Mr. Wolf.

[530] Q. Have you drawn your own conclusions with respect to the operation of the Mackie patent? A. Yes.

Mr. Wolf: I would like, your Honor, at this time to offer in evidence two sets of references which we have marked Primary References and Secondary References. The Primary References are the ones which we intend to consider at this time. I would like to offer them at this moment.

The Clerk: GG and HH.

[Primary References marked Defendants' Exhibit GG;

Secondary References marked Defendants' Exhibit HH.]

Mr. Wolf: The Primary References, your Honor, include paper copies of prior United States Patents Bessonneau 2,185,581, Bessonneau 2,157,783, Bessonneau 2,479,599 Ackermans 2,549,153, Oliver 2,046,574, Coppock 1,778,356, SaCouto 2,074,620, Rinker 2,065,027, Campbell 1,809,505. In addition, they include several foreign patents, British Patent 564,361, and French Patent 775,822, British Patent 564,361. For your Honor's convenience at the back of this group of Primary References I have included a copy of the Mackie Patent itself.

[533] Q. Would you please interpret the structures which you have observed in this Mackie patent? A. The general area described in the Mackie patent is the rear quarter,

which I understand to be the side of the car which extends from the window to the rear edge of the fabric top. This structure in the Mackie patent involves essentially what is called a 4-bar linkage, which is the simplest kind of linkage. It involves a linkage member bow of the top structure, which is numbered 1, in Figure 1 of this patent. The next member, the next linkage is the piece numbered 10, which is the so-called wiper arm or may be also the pressure arm in the patent, and the third linkage is a piece numbered 13, which contributes to the overall comparable motion of these three. The fourth linkage is usually understood to be the solid structure between the pins 2 and 14, shown in the same Figure 1, in the Mackie patent. From the reading of the language in this patent and in the file wrapper in the patent—

* * *

[537] The Court: That isn't the way he was answering. I am [538] going to rule that this witness has not got the qualifications to answer all questions that a full expert that I would regard and accept in a patent case can do. Within limitations I will take certain assistance from him that he can furnish, but the scope that he has started out to set for himself, or that you have set for him, in the exercise of my discretion, I say it is too much.

* * *

[539] Q. I believe when we were interrupted for our break, we were discussing the construction of the Mackie patent. Will you continue with your discussion of that disclosure, please? A. I think I stopped when describing the actual linkage structure of the bow, wiper arm and guiding linkage 13 in Figure 1. These linkages are made to operate when the bow structure is raised and Figure 1 shows the fabric 20 attached to bow 1 on the rear edge which is not numbered in Figure 1, but which appears under the arrow indicating the cross section 6.

Figure 2 illustrates that in the raised position the wiper arm or pressing arm 10 has a small contour 11 which comes into contact with the fabric 20 and presses this fabric to the resilient member 27. The function accomplished in this operation is, then, one of closing the otherwise loose contact between fabric 20 and the resilient member 27 by some pressure distributed on the fabric around the edge of that resilient member 27.

The fabric 20 is usually—well, it has to be waterproof and usually its outer surface is not smooth, but rough. In most instances I have seen fabric 20 will have—the very outer surface is just permeable cloth. This means that in order to obtain a seal between the fabric 20 and 27, as shown in Figure 2, which is of reasonable effectiveness, it is necessary to produce [540] considerable pressure between the fabric and the resilient member 27 so as to minimize the thickness of that portion of the fabric material which is permeable. Figure—

The Court: I'm afraid I don't understand that.

The Witness: You can consider that the fabric 20 is made, for instance, of three layers, the inside being cloth, the middle layer, which is rubber, and the outer layer, which is again cloth, and the cloth is not impermeable and it is not smooth. So in between the middle layer made out of rubber and that fabric 20, and the resilient member 27, when you have a contact between the fabric 20 and the resilient member 27, you, in effect, have there a thickness of permeable material, which is the last layer of the fabric material.

The Court: And you say it is necessary to exert a good deal for what reason?

The Witness: So as to minimize the thickness of that layer of fabric which is permeable.

* * *

[542] The Court: Watertight against how much pressure?

The Witness: No matter how much pressure it is not going to be perfectly watertight.

The Court: Let's put it the other way. No matter how little pressure, I suppose there isn't very much. When you say watertight, I noticed that you used the word "perfectly watertight." Have you any experience in the automobile industry, the convertible top field, as to how tight watertight has to be in order to be effective?

The Witness: The watertightness will depend on the pressure you produce between the fabric.

• • •

[543] Mr. Wolf: Well, it describes a seal, a closure, a watertight seal.

The Court: It describes the seal as being a weather seal.

• • •

The Court: The witness is interpreting that to mean it must be a perfect closure. Yet, as you brought out yourself, I think it was you but now my memory may be confused,—no, I guess it may have been Mr. Pollock—that there was a gutter provided underneath there, which certainly indicated an understanding or an expectation that it was not always going to be perfectly watertight.

Mr. Wolf: I think from my understanding of what the witness might testify to, he is not disagreeing with that view.

• • •

[545] Q. Would you continue with your description of the disclosure in the Mackie patent, please? A. Well, shall I continue interpreting Figure 2?

Q. If you feel it has not been explained in full. A. Well, the way I interpret the operation of the wiper arm 11 is that its function is to reduce the thickness of that material

which is permeable, which is located between the layer of rubber, which is in the fabric 20, and the fin 27.

Mr. Pollock: Your Honor, I don't believe there is any discussion of it in the patent, concerning just what the fabric 20 does. I may be wrong.

• • • •

[546] Mr. Wolf: Your Honor, my offhand knowledge of the patent in this case is that it does not specifically point to a rubber fabric. I believe, perhaps the witness is referring to an actual fabric which he saw.

• • • •

Q. Well, in connection with the particular disclosure we see here would you interpret the function of the wiper arm and the fabric, the inleaning fin, without reference to whether or not there is a three-layer material, if you can do so? A. Yes. The only reason why I said "considerable pressure" between arm 11 and the strip of resilient material 27 is because in the back of my mind I was thinking of the drawings in the file wrapper of the patent. Those drawings show that there is a non-negligible pressure at least between the wiper arm 11 and the resilient material 27.

• • • •

[547] The Court: Well, he says there is something about the drawing that indicates the necessity of pressure. I will be glad to have you show him the drawing.

• • • •

The Witness: This is the page following 42. I think—

The Court: Those, of course, are not, as I remember the testimony earlier, anything except illustrations of the way that the top was presently being used by General Motors.

The Witness: I just want to justify the use of—

The Court: Go ahead. What is there about this drawing that shows considerable pressure is required?

The Witness: I believe some of the parts here were numbered. Can I refer by number?

The Court: Yes, indeed. You were speaking of the sponge, it is number 10.

The Witness: Yes.

The Court: It shows considerable pressure because the sponge is pressed out of shape?

The Witness: That's right.

[548] The Court: Does the patent itself say anything about sponges?

The Witness: Resilient material.

• • • •

The Court: He has told me something required great pressure. Either he is going to tell me things I can see for myself that are obvious, or he is going to tell me things that I can't see for myself and that are not obvious. If he is only going to tell me what is obvious, we are wasting our time. If he is going to tell me something that isn't obvious, I have to know he has qualifications to tell me.

• • • •

[549] The Witness: Maybe I can make only one more comment with regards to this pressure. In the column 8, line 14, the [550] sentence reads:

> "pressing this firmly against the in-leaning fin of the weather strip, pressing that fin outwardly as shown in both Figs. 2 and 8."

And my interpretation is that the upper surface of the fin 27 on Figure 2 was initially plane. Otherwise I just cannot see how Figure 2 shows that this fin has been pressed outwardly.

Q. Could you read the next sentence following the one you read and tell me whether that further supports your position? A. [Reading]:

> "This firmly holds the top material against the sealing weather strip 27 and provides a very good fasten-

ing means at the top of the tonneau in place of the channel type of fastener described in the preamble."

The Court: To help you out a bit, skip down further: "pressing the top material tightly against the rubber weather strip."

The Witness: So I interpret the arrangement of wiper arm 11 and the fin 27, fabric 20 in Figure 2, as being a sealing at the body line between the outside of the car and the inside of the car, and by inside of the car, I mean the passenger compartment.

Figure 2 shows one additional sealing between the outside of the car and the passenger compartment. This is the trough arrangement which collects the water in the U-shaped cross section [551] number 22. The fabric is there shown as leading water into that trough so it cannot possibly reach the inside of the car, the passenger compartment.

Q. Do you have anything further to say in connection with this? A. I was going to say that the sealing means at the belt line involved are folding bow structure, the wiper arm, the in-leaning fin 27 and the fabric and the means for guiding this. The seal at the trough involves the attachment to the trough, the fabric and the trough itself.

Q. Could you indicate whether or not these two seals that you speak of work independently or interdependently upon one another? A. I would say they are definitely two different seals, two independent seals.

Q. We refer to the file wrapper of this particular case and you saw a drawing of a cushion between the body line and the wiper arm. Could you tell us whether or not this particular arrangement, from a mechanical point of view, is the same or different from that which you see here in the Mackie patent? A. I would say mechanically the functions are achieved in the same manner. The sealing at the

trough is essentially identical and the sealing at the belt line, except for the change in position of the resilient materials, I would say that sealing is achieved in the same manner as shown in Figure 2 of the Mackie patent.

• • •

[552] The Court: I will let him go further and he can say what he saw mechanically different. Whether it is the equivalent or not—.

Q. Please indicate whether or not you saw anything mechanically different in the structure you viewed in the garage, using the defendants' 134 top on a 1953 Ford, as compared with the structure shown here in the Mackie patent or, additionally, the one you saw in the file wrapper? A. Well, in the auto, the 1953 Ford, there is an open space in [553] between the fabric 20 and the body line member which I would call—I think I would use a GM cross section to identify them. I don't have a number for the very body line.

Mr. Pollock: The belt rail.

The Witness: This one, It is the member which is touching the fabric from the outside of the car.

• • •

The Witness: Then in this model there is a space in between the fabric and the belt rail. There is not a contact of the form suggested in Figure 2 of the Mackie drawing. Certainly the water can pass that space much easier. As far as sealing, this is about what I would say.

Q. Could you indicate—I'm sorry, I missed your answer. With respect to the sealing, you say it was not the same? [554] A. If I am to compare the sealing arrangement in the Ford model presented by the defendants and the arrangement shown either in the GM structure or in Figure 2 of the Mackie patent, I just made those remarks as far as sealing is concerned.

Q. They are not the same? A. No.

Q. Could you indicate the difference? A. Well, the difference is mainly one of effectiveness in sealing. I say that there is a great difference in the ease with which water can pass the space between the fabric and the resilient member 27 in Figure 2 of the Mackie. Where this space is—I said provided by roughness of the material and the fact that it is not water-tight on its very outer surface, and if we compare this with the structure we saw downstairs, the resistence to the water is tremendously different.

• • •

[555] Q. With respect to effecting a weathertight seal at the belt rail, as disclosed in the Mackie patent, could you please indicate to the Court what elements are specifically and necessarily involved? A. I would say that the elements that are necessarily and specifically involved are the fabric and the belt rail, in the first place, the bow structure to actuate the wiper arm, in the absence of other means of actuating the wiper arm, some guiding means for the wiper arm, like the short linkage 13, and possibly this resilient material 27.

Q. You mentioned the fabric. Would you say it is or is not necessary to secure the fabric to effect this seal at the belt line?

• • •

A. No.

• • •

[557] Q. Could you please indicate to us specifically the functions [558] from your interpretation of this patent and your observations of the automobiles you have seen of this particular wiper arm? A. Well, I would say it has essentially two functions. The main function I can see in the wiper arm is that of distributing pressure on the fabric 20 against the belt rail so as to effect some sealing at the belt rail. The resilient strip 27, I fully agree, it is

made to take on some manufacturing errors. It is very understandable that it is very difficult to shape a belt rail to conform exactly in a compatible geometry with the wiper arm 11, and it is useful to put some kind of member capable of distributing the pressure uniformly on the fabric.

The other function I see in the wiper arm is one of preventing the inward motion of the fabric 20, and I would say this function is essentially that of all other bows of the structure, of any convertible top.

* * * *

[560] Q. Mr. Brosens, at the end of Friday's session, you were about to discuss the prior art which you have classified in a book entitled "Prior References", which is now of record in this case. Will you describe to the Court the constructions which are referred to in those particular patents, commencing with the Bessonneau patent 2,185,581? A. The Bessonneau patent refers to a hood construction in general for motor vehicles and describes the folding bow mechanism, including an arrangement for sealing at the rear quarter. I believe that Fig. 1 is the most essential thing to look at first. The fabric which is—I don't believe it is numbered.

* * *

[An easel is produced holding three charts, and the witness leaves the stand and goes to the easel.]

* * *

[561] The Court: The fabric seems to be 13.

* * *

The Witness: 13. I would describe, first, the way the rear edge of the fabric is cut. It is cut essentially following the line from 32-33 to the rear. The fabric is attached at the front of the rear quarter to one of the bows, 32, I believe. The fabric essentially between the numbers 33 and 72 in this area is loose, then it is attached to the tilt

hoop, which is No. 2, which I color in full brown [marking].

[562] The Witness: Right. And the linkage system is the linkage which connects the tilt hoop to the crank 15, and the crank 16, which I mark with brown marks [marking]. The fabric is attached to the tilt hoop numbered 2. The tilt hoop 2 is the shape of a "U", and the figure 2 of the same patent in this part has been colored with light red or pink, indicating that the tilt hoop was a continuation on this drawing in the same manner as the one shown in the figure.

Q. You have indicated that continuation of Fig. 2 in brown; is that correct? A. That is right. The four bar linkage that you see here is connected to the structure here; that means the element numbered 20, which I am also coloring with the brown color. In the raised position this tilt hoop numbered 2 bears against in Fig. 1, the rear edge of the car numbered 3. This "U" bears in the same fashion against Fig. 1. This is shown in Fig. 2 where it goes from the edge of the car; and there can be observed an overlapping of tilt hoop 2. That means in Fig. 1 there is pressure in addition along that line.

[563] The sides of the U which I here call by S are not shown under the frame of the body of the car in the same manner. The sides of the U are essentially in sliding contact with the sides of the car. This has been called scissors action.

The Witness: The motion is essentially, on the sides, it is essentially in a vertical plane with respect to the car standing upright. The tilt hoop is sliding up and down practically perpendicular to the ground. Figure 3 shows the hood of the car being lowered and it essentially shows the way the tilt hoop detaches from the body line to start to make a descending motion in the car.

The end position of this tilt hoop is shown in the figure, in the patent, it is the Figure 4, and apparently I can draw it approximately in this Figure 3 by this shadowed area.

Q. You drew an arrow. Can you indicate the purpose of the arrow? A. It essentially describes the motion of the tilt hoop as it descends into the body.

Q. Can you decide the connection of the tilt hoop to the folding bows? [564] A. Well, there is a single connection which is the link number 20 which connects an unnumbered pin, we will call it just a pin, to the main activating mechanism of the bow structure, which is about a third of a gear and numbered 21.

The links 15 and 16 are essentially guiding means for the motion of the tilt hoop and 20 is essentially the action from the bow structure.

* * *

Q. In connection with this patent, will you please describe how the hoop 2 acts in cooperation with the folding bow mechanism.

The Court: He said it did.

* * *

[565] A. The gear is essentially a mode of transmission between the motor to the folding bow structure. The gear is rigidly attached to the frame 32 of the folding bow structure so that when the gear is operated—

Q. Which gear are you referring to? A. I am referring to the set 2, 21, and 21 being the one rigidly connected to the frame, 30, 32.

* * *

Q. This particular top, can this particular top be operated from the inside of the car without the necessity of getting out to fasten or unfasten portions of the fabric? A. It can be operated without leaving the driver's seat.

Q. Is this indicated in the specifications? A. Yes.

Q. Could you indicate what type of closure is formed be-

tween the fabric and the body line of the car in the rear quarter?

[566] Mr. Pollock: Your Honor, may it please the Court, this witness is apparently testifying about this patent. I would much prefer that when questions such as this are asked, he actually refer to the patent so that we can see what he is basing his statement upon. This is a very complex patent, your Honor.

The Court: I can see that. I would like to ask him a question. What happens to any water that gets down?

The Witness: Water may get into, may pass the fabric at the body line in two main areas. One is the rear belt line where the trough 77 is solidary with the hoop 2.

The Court: What about on the quarter?

The Witness: And under the quarter, the water will run parallel to the side of the car into two collecting troughs numbered 79 and 80, which will be filled in with brown in Figure 1.

The Court: What is the course of the water? How does it get there?

The Witness: Well, these troughs are attached to the side panel at the rear quarter so that the water which follows essentially with the plane of the side panel—

The Court: If it does.

The Witness: —would reach the trough.

The Court: There is nothing to guide it, I take it.

The Witness: There is no fabric to guide it.

[567] The Court: Or anything else to guide it.

The Witness: Well, to some extent there is a gravity force which will determine the motion of the water.

The Court: That depends on the shape of the tonneau, doesn't it?

The Witness: Yes, and the mount by which the trough is positioned into the car so as to be right below the body line.

[568] Mr. Pollock: May it please the Court, I believe this response typifies what I was objecting to previously. I believe this Court will find, later on at least, there is no description in this patent as to where the fabric is attached nor any mention of tension.

The Court: Even if it were, I don't see what you would accomplish. I hope, for the defendant's sake, he has a better patent than this.

Mr. Wolf: Your Honor, I believe

The Court: It is very complicated and I would think, inefficient.

[575] The Court: Well, what do you say to Mr. Pollock's suggestion, that the witness is drawing on his imagination, not on the specifications of the patent?

[576] Mr. Wolf: And I don't think this particular patent was very well drawn. I wish I had had a chance to draw it.

[582] A. In my interpretation, the fabric is also attached to [583] the sliding members, 30 and 32 and these provide some tension at the body line and rear quarter in general.

This next Figure 3 also shows that the fabric is attached to the sliding members 30, 32 or 30, 31, because it is shown in tension between the members 6 and 5 and I would expect the fabric to slide over the point of attachment of these sliding members 30 and 32, if it were not attached.

[584] A. I would expect it is just a closure resulting from bringing the tilt hoop 2 into a small space with the rest of the body structure.

You can, if you make the two sizes equal, you would have

just about the sliding contact, you could fit a tilt hoop 2 slightly larger and get some kind of spring action against the body line of the car in that area.

[585] The Witness: Well, if I make an enlargement on this according to what I interpret—

Mr. Pollock: Again, you are assuming that is the way it is.

The Witness: If I did not make this assumption, I would not think this is a strong attachment.

Q. Would this be a conventional type of attachment, from a mechanical engineering point of view? A. It is one of many possibilities.

[586] Mr. Pollock: I object, your Honor. This appears to be a question that the witness make an invention in order to anticipate the invention here in suit.

Mr. Wolf: Quite the contrary. I am merely asking to show what type modifications you must have to come closer to the Mackie structure.

[587] Mr. Wolf: Actually I have in mind continuing the beveled edge.

The Court: All the way around.

Mr. Wolf: It would not have to go that far, your Honor.

The Court: It is one of the big troubles with that patent.

Mr. Wolf: No, I don't think so.

The Court: I disagree with you. It seems to me this patent solves nothing so far as our present problem is concerned, the sensitive area is that area which is directly forward of hoop 2.

[588] The purpose of this is obviously to obtain—I never heard the word before, maybe I misuse it—it seems to me the purpose of this patent or one of the principal purposes is to obtain a disappearing or torpedo type top—

Mr. Wolf: I am sorry, your Honor.

The Court: —which will disappear, it isn't aimed, as I can see, to keep water in any substantial quantities out of the inside of the car, you don't need to have all this complicated tilting up, for the purposes we are interested in this present patent, it serves an entirely different purpose or is intended to, namely, lowering the top down a very substantial distance.

* * *

[591] The Witness: The lower end of the fabric at the belt line would be attached to the member 2 and would lower it to the space here.

The Court: In other words, the fabric is to be permanently attached all the way along the line to this extended tube that runs all the way forward?

* * *

[592] The Court: As the top goes up and down when there is a relative change between the various bows, now taken care of by a pucker. Perhaps I should have said changes in shape. My terminology isn't good. The shape of the frame.

The Witness: Well, that's another problem.

The Court: That's another problem, too?

The Witness: Yes.

* * *

A. The additional problem is, that the front end of 2 would separate from the point of attachment with 30-32, so that there would be a ripping action at this point.

* * *

[604] [Offset prints marked Exhibit JJ-1 through 4.]

Mr. Wolf: Your Honor, I would also like to offer the

drawings which appear in Figures 1, 2, and 3, the enlargement on the board.

The Court: All right.

[Drawings marked Exhibit KK.]

[Chart marked Exhibit LL.]

Mr. Wolf: Your Honor, I would also like to offer the model which we have discussed, as an exhibit.

The Court: As a chaik, yes.

[Chalk marked Exhibit MM.]

* * *

[605] Mr. Pollock: It is my view, your Honor, that these are merely photographs and do not represent the models in good light, and I would much prefer if anything goes in that the model go in.

The Court: The model is in.

Mr. Pollock: The model is in?

The Court: Yes.

Mr. Pollock: Then I see no purpose in offering the photographs, and I object to them.

The Court: The only possible purpose would be they would go in the paper record. I don't care. I won't take them over your objection.

Mr. Pollock: I object to them, your Honor.

Mr. Wolf: Your Honor, note my exception. These photographs show the condition of the model and are useful in the paper record, as your Honor indicated, and without them there [606] would be no way of demonstrating in the paper record the model to which the witness has referred.

The Court: I stand on my ruling.

Mr. Wolf: Your Honor, I would like to call your attention to the fact that a second reference in this group of primary references of the Bessonneau 2479599, this particular patent is a division of the patent which was just discussed as indicated within the Patent Office.

The Court: Yes.

Mr. Wolf: And for that reason we will not discuss it, but it was included merely to keep the record straight.

I should like the witness to turn to Patent 2157783, also issued to Maurice Bessonneau.

Q. Will you describe to the Court the construction therein involved. We have a four-time enlargement of Figs. 1, 2, 3, to which you may refer and thereby indicate to the Court in describing the construction [handing]. A. Well, the essential features in this construction appear in drawing form in the first page of the patent. Those are Figs. 1, 2, and 3. We have a folding bow structure which from the middle of the body toward the front looks very similar to the folding bow structure of the previous Bessonneau patent 2185581. The rear quarter of this folding bow structure is somewhat different from the one shown in 2185581. It involves three bows, 71, 74, and 60, which are pivotally mounted on a link 62 which [607] is actuated by a gear similar to that in the previous patent but positioned differently. The rear quarter of the fabric is attached to bow 71 and to bow 60. 60, again, has the form of a "U" which follows the contour of the body line, and in the raised position this member 60 bears against the entire contour of the well at the body line.

Q. Now, to keep this in proper chronology, I notice in the drawings there is not the same type of body line as defined at 3 in the prior Bessonneau patent. Could you indicate on this enlargement where this body line occurs? Would you indicate it with an arrow and the letter "L"? A. You mean the body line against which member 60 is?

Q. Yes. [Witness marks.] Will you continue on?

* * *

Q. Will you indicate in the patent where you find support for this conclusion? A. On page 3, in the left-hand column,

line 36, reads as follows: "The rear frame of the hood comprises—"

* * * *

[608] The Witness: Line 36:

"The rear frame of the hood comprises a hood"—

It should be a "hoop"—

> '60 on which is fixed a rear end of the cloth 8, and is intended to be pressed in the position of use against the outer edge of the housing 5 and to penetrate into said housing when the hood is folded."

Now, I have drawn the body line, and I have labeled the body line with the mark "L"; so that this statement—

The Court: As far as I can see, that statement would be accurate if it were 6 inches below the body line.

The Witness: Yes, it would. All I want to say is, that the body line must be above the upper surface of the hoop 60.

The Court: In other words, the body line is either "L" or higher than "L"?

The Witness: That is right.

The Court: All right. I agree with that.

A. [Continuing] The attachment of the fabric to the hoop 71 is described in a paragraph in the same column on page 3, which starts at line 50.

The Court: Yes, I have read it.

A. [Continuing] And it is also shown in 62. Again, the cloth [609] is not shown as detaching from member 71 like Bessonneau drew in Fig. 3 of the previous patent, at the body line. It doesn't show any wrinkles. Now here we have the member 60 which is pivotally connected to a crank 62.

Q. Are you referring to Fig. 2? Would you indicate it? A. I would refer to Fig. 1. And the crank 62 is solidarily attached by pin 63 to the frame of the car and actuated by the lever 66.

At the other end of the hoop 60, that is, at the rear edge, Bessonneau has used the fabric itself as a guiding means. This is described again on page 3, in the left-hand column, starting line 58:

> "The pull exerted on the strips of fabric connecting the hoops to each other in the usual manner as known causes the displacement of the rear portion of the hoop."

So 8 is essentially a guiding means for the rear end of the hoop 60. When lowering, the gear controls mainly the member 10 in Fig. 1, which is in turn attached to the pillar 9; and as the gear moves clockwise, the pillar 9 releases essentially the fabric at the rear quarter and allows the bows 71, 74, and 60 to move clockwise likewise. It is essentially the full weight of the bow 60 and 74 which causes the clockwise motion of all three bows, 71, 74, and 60. 71 is pulled clockwise again by the fabric tension, and as soon as it reaches the position where [610] gravity leads it into the well, the fabric does not need to keep pulling on it, as shown in Fig. 2. There is no more tension from fabric 8 on 71; but 71 is now positioned so its own weight helps it fall down.

The hoop 60 reaches its bottom position by merely resting on the bottom of the well. This is, again, my interpretation of it because the rear end of hoop 60, being only held by the cloth it should pull unless another object came to act on it as as to limit its fall, and I imagine the bottom of the well would be this third object.

Now, this time the hoop 60 really follows the entire contour of the well opening and presses against the entire contour of the well opening, as read on page 3. This is again line 36.

* * *

[613] Q. Does this construction operate automatically? A. Yes. The mechanism takes care of itself, the lowering

of the fabric into its final position in the well, is automatic.

Q. I refer you, for example, to Page 2, Column 1, Lines 33 and following. A. Yes, the rear frame is described as adapted to be folded automatically, responsive to the mechanical control in the construction.

* * *

[615] The Court: I was saying that the upward force of 61 alone isn't going to distribute itself very much, the pressure is going to come from your material most entirely.

Q. Would you agree with the Court's conclusion on that?

The Court: I am speaking of the rear portion.

The Witness: You mean essentially what we have described as the bottom of the U?

The Court: I am speaking of the back of the car, the rear end, the extreme right-hand portion of Figure 1.

The Witness: That is exactly, perfectly correct, yes, sir.

* * *

[616] The Court: Is it not a fact that the pressure in the Mackie patent is derived directly from the linkage of both ends of the wiper arm and does not depend upon the strength of the material and tension of the material that it has?

The Witness: Yes, it depends, the dependence of your pressing is now in the linkage and tension of the fabric.

* * *

The Court: I don't see, unless the witness's previous answer was incorrect, in which he agreed with me, it may be involuntarily, I don't see that they are comparable.

* * *

[621] Q. How would you modify this construction to include within it the following elements operating in a manner such as shown in Mackie: (1) the folding bow mechanism?

* * *

Q. (1) the folding bow mechanism; (2) a member adapted to pressure the fabric against the body of the car; (3) a fabric which would come within the well of the car and be secured to the outside; (4) a trough which would carry seepage which might pass between the fabric and the body of the car from the interior of the car.

• • •

The Witness: Well, to start I would think the same kind of demonstration we did with the model on the previous Bessonneau patent would just repeat itself here. In other [622] words, we could extend the fabric instead of attaching it to 60, we can very well extend it into the well and attach it there to a trough.

• • •

The Court: Would it not be the fact that as soon as you did that, you would lose all of the upward effects of producing the pressure of the 60 and what comes in this particular patent as the rear almost entirely from the fabric?

The Witness: That is right, one of the things I would do is replace the fabric action by a link at the rear end of the 60. I would have to have a mechanical guiding means to replace the action of the fabric at the rear of 60.

• • •

A. It could be the same kind of linkage as 16 but maybe positioned in a different manner.

Q. All right. Could you then— A. Except for very minor problems of clearance, I think you could attach the fabric to the side panels almost at any height.

The Court: Excuse me a minute, I am still intrigued about the facility with which you reach this result.

• • •

[627] Q. I believe you testified as to what you do with your fabric, did you not? A. Yes, I said it would be extended almost by any amount in the body well and attached

to a trough. The only consideration which would dictate the amount by which I would lower the point of attachment would be one of clearances. I might find I like to provide sufficient space between the downward moving bows and the trough. This may be difficult to accomplish relative to the belt line, depending on the model of the car, the way the side panel is shaped.

• • •

[628] Mr. Wolf: Your Honor, I would like the witness to indicate in general the facility with which a gutter could be [629] incorporated into this particular structure. After all, we have to show your Honor there is no novelty in the arrangements which Mackie has suggested. The mere fact that the Bessonneau patent we are now talking about doesn't happen to show a gutter is not of course indicative that it was not suggested by others.

• • •

A. Well, this would be, I think, a simpler problem than the one in the previous Bessoneau patent, because in the previous Bessoneau patent you have to worry that the trough be located under the point of leakage so that gravity would direct the water into it. In this case now the fabric provided means of guiding the water in the trough so that the trough should be attached right next to the body panel.

The Court: If you extend the fabric down?

• • •

[630] The Court: In other words, if you do what Mackie and Duluk did, then you could do what Mackie and Duluk did—as I understand it. Is that what you're telling me?

Mr. Wolf: I believe, your Honor, that is what we are saying. We, in effect, are saying this is merely a combination which is perfectly obvious.

• • •

[631] AFTERNOON SESSION

Q. [By Mr. Wolf] Before we go into the next patent, I would like to refer you once more to the last Bessonneau patent with which we were concerned.

I believe I failed to ask you to point out the similarities of function between the arm 60 in this particular patent and the wiper arm of the Mackie patent. A. Well, when we covered the Mackie patent we pointed out that the wiper arm 10 had essentially two functions; one of pressing the fabric against the body line to effect a seal at the body line and the other to prevent the inward motion of the fabric. This is accomplished by member 60 equally as well in the Bessonneau Patent 2,157,783.

Q. You were downstairs, I take it, when we had the demonstrations in the garage? A. Yes.

Mr. Pollock: Which demonstrations are we speaking of?

Mr. Wolf: The demonstrations conducted by the defendants.

Q. Do you recall seeing a test conducted in which the fabric of the 1953 Ford was secured to the wiper arm by a paper clip? A. Yes, I do.

Q. Could you in any way correlate that particular demonstration with this particular reference? [632] A. Well, it is going to the Mackie patent, I had described the seal in the belt line as independent from the seal provided by the trough 22.

I think this is very well pointed out by that experiment where the seal we obtained in the belt line is essentially the same whether the fabric extends down to the trough or not and the actual structure we achieved by wrapping the fabric around the wiper arm on this Ford model, I think looks very closely like the actual seal achieved by the member 60 in this Bessonneau 2,157,783.

[633] Q. Will you please now go on to the next reference, which is British Patent 447,641. I believe we have a blow-up of that also. Would this be of any help?

Mr. Wolf: Before you describe it, I would like to offer this blow-up in evidence. It does contains some markings. I offer the blow-up of Bessonneau Patent 2,157,783, to which the witness has previously referred.

[Blow-up of Bessonneau Patent 2,157,783 marked Exhibit NN.]

The Court: What is the British patent number?

Mr. Wolf: British Patent 447,641.

[634] The Court: That again is Bessonneau?

Mr. Wolf: Yes, your Honor.

Q. Could you describe the operation of this particular construction? A. Figure 1 of this patent shows that again the forward end of the folding bow structure is essentially similar to the previous Bessonneau structures.

The rear end, that is, looking from the member 1A backwards, is quite different from the previous Bessonneau structures, in that the fabric now is secured inside of the well of the body.

The securing is shown at 26 in the cross-sectional view, Figure 1, and also by referring to Figure 3. It may be noticed that that attachment is contained along the sides of the well.

* * *

Mr. Pollock: If the witness is to testify at this point I request he specifically identify what part of the patent he is referring to.

The Witness: I am referring to the drawings, for instance, Figure 1 starting at 26, which is the edge of the fabric. We see a dotted line which follows behind the seat in the car.

[635] Q. Would you indicate right on the disclosure here the word "seat" with reference to it? A. The dotted line

continues after, past the seat and extends all the way to the member 1, as a continuous straight line, which is a direct prolongation of the dotted line.

* * *

Q. Would you indicate the dotted line the Court has referred to by writing "body line" with a lead arrow to it? Now would you indicate— A. I would like to point out that this is the body line. By examining Figure 3, when the member 1 starts its motion rearwards [636] the body line appears as a full line in front of the member 1 and that line could not possibly mean the fabric because there would have to be a continuation of the contour of the fabric.

The Court: You say that dotted line shows that the fabric is fastened to this horizontal member?

The Witness: It shows that the fabric overlaps the body line and projects into the well of the car.

Then I look for the end of the fabric, the edge of the fabric into the body well and I see that the lower edge is that continuation of the dotted line behind the seat because this line stops at the member 1 where the fabric is attached.

Q. Would you indicate what you consider to be the lower edge of the fabric? A. It is indicated in the drawings.

* * *

[637] The Witness: Well, I would expect that the lower edge, if you did not have it fastened, you see a wrinkling of this straight line, as the fabric loosens, I would not expect the edge of the fabric to remain straight when the entire top becomes loose by lowering the top in Figure 3.

Q. Do you find any indication on the specifications which indicates the securing means used for this fabric? A. Yes, I found at Page 2, Line 19, it refers to the other end of the canvas that is attached at 26 to a small cross piece within a space provided for the folded hood at the rear of the vehicle and then on Page 3, Line 37, it says at the

end of Line 38, the end of the canvas is fixed within the space provided for the folded hood in the rear of the vehicle body.

The Court: All that means is you have passed the point 26, isn't it? How does either of those references indicate that it is attached to 26 forward horizontally?

The Witness: Well, if we take the second one, the second one is not specific about the attachment.

The Court: Is the first one?

[638] The Witness: The first one is specific, the 26.

The Court: Oh, yes, but I am asking you where you draw the conclusion beginning on 26 and running forward, it is attached.

The Witness: I would not draw the conclusion from those statements.

The Court: I thought that was what you said.

The Witness: I understood the question to be where in the specifications they were mentioned, the attachment of the fabric.

Q. Do you find any further language indicating securing the fabric below the body line? A. Not offhand. I think I remember some mention.

Q. Do you find any indication which would indicate this construction is automatic in nature? A. Yes, in the description on Page 2, starting at Line 33, Mr. Bessonneau discusses the case where there is no mechanical control and describes the sequence of manual operations that are necessary to raise and lower the top. Then starting Line 51, he says,

> "However, it is feasible to employ for the said flaps, as well as for the hoop 1, various mechanical controls either combinate or separate. The drawings show diagrammatically by way of example, a control for the movement of [639] the principal hoop 1 by means of an electric motor."

And further the description given from Line 33 on, it can be seen that the activation of the hoop 1 is the only requirement for a completely automatic operation, leaving out the flaps.

Q. I would like to go into a little more detail your interpretation from the mechanical standpoint of the disclosure shown in Figures 1 and 3.

If, for example, the fabric were not attached, say, to the member 1, or down below, what position would the forward edge of the fabric take in Figure 3? By the "forward edge of the fabric" I mean the forward edge of the rear quarter? A. Well, I would expect to see a loose edge overlapping or standing past above number 1 and from number 1 I would expect to see a loose edge there.

* * *

[640] The Court: I have heard no testimony from you indicating why you thought it was attached to 1-A. I thought you had it attached to this arm here, which has a number 5-A.

The Witness: This here.

The Court: The lower edge.

The Witness: 5-A.

The Court: Call that 5-A. The testimony you gave with relation to the dotted line, I understood you to indicate it was attached to 5-A, not that it was attached to number 1.

The Witness: No, I spoke of two dotted lines. One is one that fastens behind the seat and one is at the bottom.

The Court: How do either of those dotted lines [641] indicate the attachment to 1-A.

The Witness: Not at that time, I was speaking of one—

The Court: Where do you find there was any showing there was any attachment to 1-A.

The Witness: I don't.

* * *

[642] The Witness: 20 is a mistake. I confused it with [643] the label for—

The Court: I caused the confusion. I was referring to 20 as being—

The Witness: This is a cross section.

The Court: It really isn't 20, but it is a cross section right above 20. Do you not observe a complete space between that cross section and the top? And is that not even more obvious over at 9?

The Witness: Let's see.

The Court: I don't want any more testimony based on speculation—this drawing is perfect—because it appears to contradict what the witness has stated. What the witness might have said might well be correct—I don't know; but it indicates the futility of the examination based on the assumption that this is such a perfect and complete drawing.

* * *

[648] The Court: And I might add that I have sometimes given some thought to what I said sometime last week as to how far this witness' qualifications go as an actual matter of construction.

* * *

[652] A. There would be some special arrangement which would have to be done if you wanted to maintain the space between the fabric and seat, or you could increase the space or do away with the bottom of the U, of course, and attach fabric at the rear of the belt rail for the rear edge, the side quarters could accommodate bow 2.

Q. You said you could do away with the bottom of the U, such as shown in the first Bessonneau patent.

Mr. Pollock: Objection, your Honor. He said he would have to, he did not say he could.

Q. Did you say you have to or you could? A. I mentioned it as one of three possible alternatives.

[654] [Enlargement of British Patent 447,641 marked Defendants' Exhibit OO.]

Q. Would you turn, please, to the next reference which is Ackermans.

Q. Well, the Ackermans patent again, like the Bessonneau patents, covers a folding pillar structure and detail in addition to describing means for sealing at the rear quarter. Actually in the Ackermans patent figures 9 and 10, they are probably the only ones which are relevant here. Figures 9 and 10 show how the seal is effected between solidary attachment at the belt rail 120 and the pin 23 of the folding pillar.

The way the seal is obtained here is by effecting a tension between the end of the belt rail 120, which I think is 132, and the folding pillar 32, by tensioning the fabric between those two points, the fabric can be made to become adjacent to the inside panel 128, in Figure 10. There is a pressure accomplished between the strip 128 and the edge of the body at 121 which effects a seal.

[655] The Court: What creates the pressure?

The Witness: The tension between the folding pillar 22 and the attachment at 132.

The Court: In other words, there would be a loss if the fabric were to stretch, for instance?

The Witness: You mean if it lost its stretch, yes, the seal would be lost there.

In addition the sealing means the fabric 126 extends far enough below the body line so that water passing that seal at 128 can be directed into the trough 124 as shown in Figure 10.

Q. Would you indicate on this enlargement the portion of the fabric which extends below the body line of Figure 9? A. In Figure 9 the portion of the fabric is labeled 130, I believe; here is the brown marker again.

Q. You apparently indicate that portion that extends below the body line in brown patch lines? A. That is right, shaded brown.

Q. What is the purpose of not securing this fabric below the body line?

Mr. Pollock: I believe it has been clearly testified it isn't, although I agree it is the case.

The Court: All right, let's assume it then.

Mr. Wolf: I think it is fairly clear, your Honor.

A. Well, in this Ackermans construction the hinge 24 is close to the belt line and if we had a permanent attachment along the [656] lower edge of the fabric of flap 130, it is conceivable that in folding the pillar 22 you would rip at least the forward end of the flap 130 from its attachment at the lower edge.

This would not really be the case if you had an attachment lower—I mean if the pin 24 were placed lower. You lower the position of pin 24, then.

Well, if you want to secure permanently the flap 130, you can do so by prolongating the flap lower, closer to the trough 124. This I think would be sufficient to allow for a permanent attachment at the lower edge of the flap 130.

The Court: Without ripping?

The Witness: Without ripping the fabric from the attachment.

Q. Apparently then it would be a question of degree and as to how far down you had to bring it to effect this securing, is that correct? A. Yes.

* * *

Q. Are there any other features you would like to point out about Ackermans reference? A. Well, the one feature is that it shows how you can separate [657] the different areas of the fabric, namely, the rear quarter from the rear edge, you can attach the rear edge to 120 permanently and use flap means like flap 130 to effect a closure between

the remaining edge of the fabric at the rear of the fabric. Bessonneau shows, all the Bessonneaus we have seen do not show the fabric attached at the belt rail along the rear edge.

Q. Is this device automatic in operation? A. Yes, it is. This is pointed out.

Q. Does this construction effect a juncture and closure at the rear quarter along the sides? A. Yes, there is, by means of two independent seals, 128, 121, and Figure 10 at the belt line and the catching of seeping water into the trough 124.

* * *

[658] Q. Do you find any language in the Ackermans patent which indicates that no snap fasteners are required in the operation of this construction? A. Well, the answer is, Yes, I found such indication.

[659] Q. I refer you to columns 1 and 2, at the bottom of column 1. Is that the reference you referred to? A. That is right. [Reading]:

> "A further object of the invention is to provide an improved separable juncture between the top fabric and its lower forward portion and inside of the body at the belt line whereby no snap fasteners are required on the outside of the body to insure a tight weather-proof joint."

Mr. Wolf: I would also call the Court's attention to the paragraph that immediately follows that, your Honor, as having some bearing on this structure.

* * *

Mr. Wolf: Beginning with line 4, your Honor, in column 2.

* * *

The Court: All right. We'll take a short recess; and after the recess, Mr. Pollock, I think it might be well if you [660] would state for the record the points in which

you claim Mackie and Duluk constitute invention over Ackermans.

. . . .

Mr. Pollock: As I understand the Court, you wish me to comment on Ackermans?

The Court: Yes.

. . . .

The Court: Wasn't there something in the stipulation to the effect that Ackermans could be considered, however?

Mr. Pollock: Yes, your Honor; yes, your Honor. That isn't the point in making this comment, your Honor.

I invite the Court's attention, however, to a First Circuit case which will have some bearing on my consideration of things here. The case is Dengrio v. Commercial Consolidated Coal Corporation, at 23 Fed.(2d) 384, 385. This case—and I will read a brief quote from it—states that the fact it was co-pending so long with Brockman in the Patent Office—they are speaking of two cases, two co-pending applications—the fact it was co-pending so long with Brockman in the Patent Office and no interference declared on the extracting clauses, creates a strong presumption that Brockman in this process had a patentable [661] novelty.

There was also similar law at 69 Corpus Juris Secundum, at page 595, where it states: Likewise the fact that it alleged an anticipating patent was pending in the Patent Office at the Patent Office at the same time as the patent in suit and that no interference had been declared between them, is strong evidence of patentable novelty. And to the same effect there is a series of other cases which we can brief for the Court's benefit.

The first point I make, therefore, is that there is at least a presumption that these patents which were both being examined at the same time were considered by the Patent Office in the light of their respective disclosures.

There is no question, however, that no interference was ever declared between them; and this procedural matter in the Patent Office of itself raises a presumption that Mackie-Duluk is patentable over Ackermans.

Now, getting into the structure—Would you wish me to discuss that point further?

Mr. Pollock: Getting into the structure, we find there are a number of structural distinctions between Ackermans and Mackie-Duluk. The first is that Ackermans never had a flap which extended down far enough to attach to this part. And we will show during rebuttal that Ackermans was a man of some experience in this field and yet his patent never recognized [662] any structure where the fabric could be permanently fastened to the inside of the car, to the rear quarter.

• • •

Mr. Pollock: As a result of this non-attachment Ackermans conceived that his seal, if you will, is formed by the closure of the fabric. This Court recognized, however, that this fabric has changed, and as a result of that we find that the seal, or at least we contend that the seal would be lost within a very short time.

I further invite the Court's attention to the fact that we had an ex parte demonstration where the fabric was actually attached to the trough but the wiper around it was removed; and this Court will recall, I believe it was in 1953 or '4, without undue force being applied to the fabric the top material was permitted to be pushed into the body by a matter of an inch and three-quarters or thereabouts.

It is our contention that under actual operating conditions the Ackermans patent would be subject to this precise effect; that wind forces alone would force the fabric into such a point that all of the water passing the seal at that point would [663] be directed outside of the trough, or at

least the major portion of it would be, and could result in water damage.

Therefore we say, first of all, that there is the important distinction that in Mackie-Duluk the fabric extends down into the trough and is permanently attached to it so that any water passing the belt line is directed into the trough. Ackermans does not teach that structure and has no suggestion that such a structure could be provided. As a matter of fact, as the witness has testified, if the fabric were attached to be permanently fastened to the inside of the car, the first time you tried lowering the top it would rip loose.

I will further note that in the Mackie-Duluk structure there is what we call a wiper arm. This wiper arm exerts pressure on the fabric or at least restricts the inward movement of the fabric. This becomes very important under actual operating conditions since this of itself prevents the top material at the rear quarter from being inside or from flapping about, due to wind forces or other forces which might be applied. In that regard I also note that such other forces might occur in the case of ice or snow piling up adjacent to the rear quarter; and it is our contention in Ackermans the building up of such forces would perforce force the fabric in to the point where there would be nothing to prevent snow or ice or water from reaching water damageable proportions.

I should also like to note that from a purely abstract [664] point of view the Ackermans patent has never been adopted commercially. This structure has never appeared on any commercial automobile that we know of. In distinction to this, however, the Mackie-Duluk patent was readily accepted by the industry and was adopted on a number of cars, particularly in '52 and '54 Fords, and '52 and '53 General Motors cars, and found great success in the industry.

We believe, therefore, that the presumption which arises from the fact that no interference has been declared, the further presumption which arises by reason of the commercial success exhibited by the Mackie-Duluk structure as opposed to no commercial success of Ackermans, and the fact that there are structural distinctions relative to where the fabric goes, how it is attached, whether it cooperates with the wiper arm—all of these not only show a structural distinction between the patents but a patent structural distinction.

The Court: Thank you.

Mr. Wolf, I don't want to be unfair to you. Do you have any comment you wish to make at this time while it is in this particular frame? I will be happy to hear it. You don't have to say anything, but I want you to have an opportunity if you wish.

* * *

[665] Mr. Wolf: There is only one point I would like to make, and that is something that was particularly obvious. That was the point that Ackermans patent is not a commercial structure. I would merely like to point out, your Honor, first, there is a stipulation with regard to the date of Ackermans patent; secondly, we have prepared some exhibits to identify the original installations that show the Ackermans patent number. So to that extent I would like to point out, your Honor, that Ackermans, if it wasn't an actual installation, at least some people conceived it as such.

Q. Would you please turn to the Best patent, and would you indicate the structure disclosed there?

The Court: 173?

Mr. Wolf: Yes, your Honor.

A. The structure shown by Best and commencing with 63 and 64, is one where a fabric is used to cover the body by means of sliding bows instead of folding bows; and

Fig. 4 shows that the rear edge of the fabric is permanently secured by fasteners numbered 25 in Fig. 4.

The Court: I'm sorry, but I haven't found it. Oh, yes, [666] I have it. I see 63.

* * *

A. Now the fastener 25 actually is at that point shown in Fig. 3 fastening the fabric and also the strip 43. The description of Fig. 3 is on page 2, the left-hand column, line 59. The paragraph describes that the space in between the bows is maintained by web straps 43 suitably secured as by rivets 44 to each of the transverse ribs 33 and to a forward transverse top header 46 as at 47, and secured at their opposite ends, with the rear edge of the top fabric 18, to the rear deck of the body adjacent the top well 28, as in 25. So, these web straps 43 are all secured at the rear edge of the body. And in this manner there appears to be a mistake in the drawing of Fig. 3. The web straps 43—

The Court: Don't go down.

The Witness: Pardon me?

The Court: They don't go down to the bottom.

The Witness: No. They should just reach the body line, and actually they reach it and pass it.

Q. Would you indicate on this enlargement the correction which you believe should be made in the drawing Fig. 3? A. Well, going to Fig. 4, the body line is clearly indicated about the provisions for screws number 50a and a continuation of the upper edge of the body, and this continuation is practically a straight line until it reaches the back of the rear seat; so, [667] in Fig. 3 actually the body line should appear as a continuation of the door upper edge and similarly behind the seat.

Q. In Fig. 4 it shows a curve upwardly? A. Yes. I am assuming the upper contour is essentially the same.

Q. Wouldn't the body line then continue across from the

point I'm now indicating to this point? A. Yes. This would be at the middle of the car. The cross section shown here is practically taken at the very center of the car, and therefore 25 is probably the highest point of the tonneau at the rear edge.

Q. Would you look at Fig. 1, I believe it is, which seems to me, looking at it from that point of view there may not be any—there may be a perfectly flat surface at the top, or is there a bow? A. Well, the way I see it, there is a curvature of the tonneau behind the rear seats so that the point labeled 25 in Fig. 3 is actually the highest and the tonneau descends over the sides of the car slowly, and that is what explains this here.

Q. You drew a body line in blue ink just now. Would that not be dotted? Wouldn't the fabric be in front of it? A. That's right.

Q. In other words, you could not actually see the line you just drew? A. I would see it as a dotted line in conventional drawing practice, and I [668] would see the web strap 43 attached at this point which I have just labeled "p" in a manner similar to the way it is attached at 25 in Fig. 3.

Q. Now that apparently has a portion of this that does not go to the side quarter, and only a portion goes below the body line. Could you indicate in cross section the portion that does go below the body line? A. You cannot have any fabric rearwards of point "e" go below the body line because the fabric behind is attached on the body line as shown in 25. In front of "p", actually any shape which joins "p" with the rest of the flap shown in Fig. 3 would be possible. As a matter of common sense I would assume this contour as in most cars. Right at point "p" the flap that extends into the well starts doing so right after the fastening at "p".

Q. You have drawn an angular line? A. Yes.

Q. What would you call it? A. I would call it the corrected edge.

Q. All right. Now I notice there are circles indicated at 59. Will you tell us what those circles indicate? A. At 59 these are detachable screws which the driver cannot take care of when the top is ready to lower and he can do it from the inside of the car.

The Court: Are those comparable to Dot fasteners?

The Witness: I think that Best shows them as coarse [669] threaded screws so a couple of turns would fasten them. They could be snap fasteners just as well.

* * *

[670] Q. I am now showing you an enlargement of Figure 10 of this patent. Will you indicate to the Court where this cross-section is taken? A. The cross-section is taken at the very first screw. There is a screw which is most forward, with respect to the car and it is therefore the screw which is closer to the body line. The other two screws go deeper into the well.

Q. I note element 61, would you indicate what that element is in Figure 10? A. 61 is a flap which is described as intended to divert the water running down the top over the body line. This means that water running down the top would essentially follow the path shown by my arrowed line.

The Court: It is part of the fabric?

The Witness: Yes. It is sewed on the fabric and if there is a slight resiliency, the description of 61 is a slightly resilient flap.

The Court: Is 59 that coarse threaded screw you spoke of?

The Witness: That is right.

* * *

Mr. Pollock: Actually we will concede the best features

of these are snap fasteners as well. I believe they are two [671] separable parts and they can be snapped apart.

The Court: I would not think it would constitute an invention, to change from one to the other.

Mr. Pollock: No, but actually he does speak of it as snap fasteners.

The Court: They are not automatic?

The Witness: No, these have to be screwed and unscrewed when the top is raised and lowered.

The Court: Yes.

Q. Could you indicate how far along the sides this flap 61 extends? A. Well, 61 in his construction is made to overlap the body line and extend parallel to the side of the car at the exterior of the car, so that if water should get in, it would have to actually be forced upward before it can reach the inside of the car.

Q. Now would you indicate whether or not this flap extends from the member, from the point of securing 25, the forwardmost point of securing 25 to the forward edge of the fabric? A. No, this flap—.

Q. Would you refer to Figure 2 in the reference? A. Yes. Figure 2 shows that such flap extends from the bottom of the window frame to the first point of attachment 25. It is labeled as flap 61 in Figure 2. This is actually the overlapping portion of the flap.

[672] Mr. Wolf: Your Honor, I should like to call to your attention some specific language in this particular patent.

I would like, for example, to call your attention to the first column of the patent, the second paragraph, all but the last sentence in that first paragraph.

The Court: Yes.

Mr. Wolf: I would also like to call your attention to specific language describing this arrangement shown on

Page 2, the right-hand column paragraph, commencing with Line 20 and also the paragraph that follows it.

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[673] Q. Now, in your opinion would it make any difference in this particular construction how far down the flap that extends within the body line might extend? A. Well, the flap can be extended by any amount into the body.

Q. There is a specific shape to this flap, does it make any difference in the patent? A. No, the only thing I would say is that as long as it must be detached, the screws 59 should be within reach of the operator.

Q. In your opinion does this fabric adjoin the inside of the tonneau of this car? A. Yes, the flap 20 is shown in Figure 10 to be adjoined to the body.

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Q. Could you compare the shape of the fabric and its function [674] in this construction with the construction you saw in the defendant's 1953 model car, 1953 Ford model car? A. My recollection is it did not have a flap in that car.

Q. I would like you to describe the positive similarities before you describe the dissimilarities. I don't mean necessarily of course the manner of stitching, I mean the overall arrangement. A. As far as the shape of the fabric is concerned, I would say it is very similar.

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[675] [Enlargement of the Ackermans patent marked Exhibit PP.]

[676] Mr. Wolf: Secondly, the Best references, the Best enlargements which were also marked by the witness, which comprise two enlargements.

[Enlargement of Best patents marked Exhibit QQ.]

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[687] The Witness: There is a sealing means along the rear edge which is similar to the Ackermans way of obtain-

ing a seal, that is by tensioning the fabric so as to obtain pressure of fabric against the rigid member which here is labeled 6 in Figure 1.

[689] Mr. Wolf: I believe, your Honor, there is an Omnia publication which has already been submitted. I don't believe we have but one copy.

[690] The Court: You stated you were going to rely on the photographs because of lack of a translation.

The Court: I believe the plaintiff is entitled to an original translation.

The Court: I can read French myself, but that does not help the plaintiff too much. However, he can point to the photograph and let's see where we go from there.

[691] Q. I would like you to examine the photographs and indicate whether in any of the prior art you have examined you find a construction disclosed which you would consider to be typified by these photographs.

[692] The Court: Before ruling on Mr. Pollock's objection, I would like to hear what the witness has to offer about this.

The Witness: You mean the French?

The Court: Not the French, no. I have read the French, from which I get no help at all—by which I mean it doesn't, assuming my translation be correct for the moment, it doesn't seem to be anything but a general description—this is a happy invention it is not too expensive, it produces a torpedo effect.

The Witness: Well, to me this seems to be the construction of the first Bessonneau reference we looked at.

Q. Will you indicate support to your conclusion. A. First is the fact of the flaps. The flaps are indicated in the first

reference. In Fig. 1 they are shown by the numeral 71.

Then you can compare the last picture in the publication to Fig. 3 in the first Bessonneau reference we examined, and in the third picture some of the bows are visible and from the outline it is the same as those which would be expected to be visible from Fig. 3.

Further, by the contour of the cloth one could tell the position of some bows in the third picture in the publication; and I feel that one such bow is the one which would be numbered 4 in the Bessonneau reference which is seen supporting the cloth [693] above the window in the first picture. Similarly, bow 48 seems to be the cause for the particular shape of the fabric in the third picture.

Q. Will you compare the tonneau contour? A. Yes. In general, the tonneau contour is of similar shape, but also the third picture in the publication shows no external flaps along the rear edge, which is one of the characteristics of operation of the Bessonneau reference examined.

Q. You mean, you can't see it in the picture; is that correct? A. I will say the picture shows along that rear edge there is no metal flap which opens outwardly to allow for the raising of the top.

Q. Isn't it true in this Bessonneau that the metal flap slides down within the body and not outwardly, as shown in Fig. 6? A. Yes, Fig. 6 shows one such possible arrangement; and Fig. 4 shows another. In both of them the metal cover slides into the body.

Q. So to that extent it still could be identical? A. Yes.

Q. Do you have any other remarks you care to make with respect to this reference? A. I don't think so.

The Court: I will take it.

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[705] *Cross-examination by Mr. Pollock*

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[707] XQ. Now in order to approach this problem, I

would like to get briefly at your model. As I recall you said this is a model of the first Bessonneau patent 2,185,581, is that correct? A. Yes.

XQ. You said that the various linkage elements were actually drawn from the drawings in the Bessonneau, is that correct? [708] A. That is correct.

XQ. You scaled them off, did you? A. Well, we—the scaling was done by making a photographic enlargement of the Bessonneau drawing.

XQ. So actually then it is your contention, I take it, that in so far as the linkage elements are concerned, they are a fairly accurate representation of what Bessonneau shows in the drawings? A. Yes.

* * *

[709] XQ. I realize that. But my question is, do you believe that the folding, if you will, of these linkage elements in your model is a fairly accurate representation of the Bessonneau folding—in so far as these particular linkage elements are concerned? A. Yes, I do.

* * *

[712] XQ. Are you telling me now your model does accurately depict what is shown in the Bessonneau drawings? A. I'm just saying—

XQ. Well, I would like an answer to that question. Does it or does it not accurately depict what is shown in the Bessonneau drawings? A. It is the same criticism I had before. The attachment of links is not consistent with either side of gear, for instance.

XQ. So that is your answer, this does not represent accurately what Bessonneau shows in his drawings? A. What do you mean by accurately?

XQ. Well, I mean—

Mr. Wolf: Objection, your Honor. I think that Mr. Bessonneau himself is not consistent in one view with the other.

[713] The Witness: I think Fig. 2 is very clear, your Honor. It shows that the bow element 4 and the bow that we have numbered 10 here are positioned one on top of the other.

XQ. But that is not the case in this particular model; is that correct? A. That is right.

XQ. Now you did use the drawings to make the model; is that right? A. That is right.

XQ. Now in your opinion which is in error: the model or the drawings? Obviously they do not correspond. A. Well, the size of the elements is still correct, and the way we have assembled the elements for simplicity is exactly the same as shown in Fig. 2 of the Bessonneau drawings.

XQ. And as the result of that the elements have a quite different positional relationship as shown in Fig. 2 of the Bessonneau Reference; is not that correct. A. If you want to study the relationship of the bows in motion along the belt line, I would say that 62 of the Bessonneau reference is what you have to look at. We have not tried to [714] reproduce t.. s in this model.

XQ. But I repeat my question. Obviously there is a variance between the operation of your model and the operation as shown in Bessonneau? I repeat my question again. In your opinion, which of these two items, namely, the model and the drawings, are in error? A. It all depends on what you mean by error.

XQ. Well, they do not correspond. A. As far as they do not correspond, I say the model is in error.

XQ. Will you agree with me, that in your model the element 10, which you have said corresponds to the Mackie-Duluk wiper arm, is relatively widely spaced from the side-wall of the car? In your model, is not that the case?

Mr. Wolf: Objection, if your Honor please. What do you mean by widely spaced?

XQ. Is it not true that it is spaced by at least the thickness of another pillar member?

Mr. Wolf: Objection, your Honor.

[715] The Court: I will take the second question.

XQ. Is not that obvious to you? A. Yes.

[717] XQ. Now, just for purposes of our discussion here, since you have made a great deal about these drawings, do you have any information about how patent drawings are prepared?

A. No, I do not.

[718] XQ. In other words, you're saying then you don't know how patent drawings are prepared, or how accurate they are intended to be; is that correct? A. I think that is correct.

[721] XQ. Referring your attention to the tilt hoop 2, will you concede that this is a fairly long hoop, the total length, I am concerned with the length between the ends.

The Court: You have in mind, regarding that hoop as a single unit, going all the way from one side around the back and up to the other side.

Mr. Pollock: Yes, your Honor.

The Court: It is obvious.

XQ. Have you not testified with regard to the Mackie-Duluk structure, it is extremely difficult to fit a fairly short wiper arm to the same geometry to the side of the body?

[722] A. I don't think so. No, I don't think so.

Mr. Pollock: If the Court will bear with me for just a

moment. I invite your attention to your testimony in the record, Page 558, I quote starting about Line 8 I believe you said, showing you your testimony:

"It is very understandable that it is very difficult to shape a belt rail to conform exactly in a comparable geometry with the wiper arm 11."

* * * *

XQ. Did you not so testify? A. That is right, yes.

* * * *

A. I repeated essentially what Mr. Booth stated in his testimony, that in manufacturing it is difficult to make the shape of the wiper arm conform with the exact shape of the body line and therefore you would expect variations in the clearance and you would put a resilient member there.

* * * *

[723] A. The other kind is just local dis-conformity, I mean, overall the movable member 2 of the Bessonneau reference may conform with the side of the tonneau but in spots you may find for one reason or other suddenly there is a gap.

[724] XQ. As I understand it, you said it was very difficult to shape the wiper arm of the Mackie-Duluk to the belt rail of the car, is that correct? A. To shape it exactly, that is where the difference liinges.

XQ. By the same token, is it not very difficult to shape the tilt hoop 2 in the body of the car? A. Yes.

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XQ. Now you have testified that the hoop 2 in Bessonneau is intended to form a seal in the belt line. A. Yes.

XQ. We have already found that there might be some gaps between the tilt hoop 2 and the belt rail. [725] A. That is right.

XQ. Is it your understanding that the word "seal" is intended to encompass these gaps as well? A. No, I would

say you don't have a good seal. I said, where you have a gap it makes a tremendous difference as far as the amount of water that gets in is concerned.

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A. I will say that Bessonneau provides a fit and it is probably not a good sealing means in the construction he shows and that is probably the reason for the troughs along the side of the car.

[726] XQ. Now with this something less than good fit, and the troughs, do we then have an effective seal? A. I don't understand.

XQ. Well, as I understand your testimony, you said that he does not have a good fit, possibly he provides troughs therefore.

The Court: I think what Mr. Pollock is asking you, is there any assurance of the water that gets through, that it will go into the troughs?

The Witness: Well, if a car is taking a very sharp turn or something like this, so that there is a lateral acceleration of the car, then the water that gets in can conceivably escape the trough. If the trough does not provide for such occurrences. We pointed out the shape of those troughs is not very well described and I think that those troughs would extend into the body so as to catch such water and it depends how much you provide for rapid turns in a case like that.

XQ. Where it extends into the body, that is an assumption of your own, I gather? A. I would say it is more than my own.

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[727] XQ. So that if all the water is required to go into the trough by some structural element, then we have a good seal in so far as the interior of the car is concerned? A. Yes.

XQ. But you find no structural element in Bessonneau which requires that all water go into the trough? A. No. I

said if the trough is large enough the water would be required to go into the trough. What you call the structural element, it is just a large trough.

XQ. Isn't it quite true that the trough is considerably below the belt line of the automobile in Bessonneau? A. In the average, yes.

XQ. Is it not true all water passing the belt line must pass quite a distance before it encounters a trough? A. Yes.

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[728] XQ. As I understand your testimony, one of the major determinants in Bessonneau in determining whether or not all the water will go into the trough is the dimensions of the trough, is that correct? A. Dimensions and its position.

XQ. Right. A. With respect to the belt line.

XQ. And as I understand it also Bessonneau has no good description of dimensions of his trough, of where it is positioned, is that correct? A. I think that is correct.

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XQ. Is it not true that if we attempted to increase the width of the trough, that would tend to interfere with the folding or linkage into the recess? A. Yes, that is true.

[729] XQ. Therefore, can you not say that because of the nature of the linkage trough by Bessonneau, his trough must necessarily be narrow? A. Well, you are limited in the amount of inward dimensions of the trough.

XQ. Even though lateral accelerating forces might throw the water farther than this limited dimension, is that correct? A. Yes.

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[741] XQ. So, in other words, when you think of the simple changes which could be made in the Bessonneau structure, you are drawing on a half-term study; is that not so? A. Mostly.

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[742] XQ. That is what I meant by the teeth. Have you ever had any practical experience working with linkages of the type shown in the Bessonneau patent? A. Yes, I would say yes.

XQ. What? A. It is again this half-term training.

* * *

XQ. You can't remember any work with automatic linkages; is that correct? A. That is correct.

* * *

[745] XQ. My only problem is, my only real point is when we start making the changes you suggested, we find we have a whole bunch of incidental problems arising. A. Yes, but they are simple and independent problems we have [746] seen so far, how many problems?

* * *

The Court: I raised the question as to whether he could make it solidly affixed without getting into a ripping process. He said he could, if I remember it, but I don't think he said how he was going to do it.

The Witness: Let's see; I attempted solving the problem in about 20 seconds and I got lost in it. I would like to get this straight.

XQ. Well, let's take the first problem which the Judge suggests. If you recall, we found that when the lid folds up, when the top folds on the Bessonneau structure, we have a great puckering of fabric in this unattached area. I invite your attention to Figure 3. The question was, could this fabric be permanently attached to the body in this region?

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[748] The Witness: Are you asking whether the lower edge, the lower loose edge of the fabric as is shown now in Figure 1, for instance, could be attached at the belt line which is facing it permanently in this structure as it is now?

XQ. Yes. A. I think it is obviously not.

XQ. You could not attach it there? A. No.

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[749] XQ. If we were to extend the fabric downwardly into the automobile on the Bessonneau 2,185,581 structure, would there be any problem with an interference between that fabric and the gear mechanism? A. Yes, there would be an interference problem because the gear shafts, the gear, the pinion which follows it are all [750] mounted directly on the wall of the car.

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XQ. I believe what I am trying to find out is this. As you recall in your discussion of the Bessonneau patent, you pointed out how all of these elements and so forth of the Bessonneau could be changed, could be modified so as to finally arrive at the Mackie-Duluk structure. Do you recall such a discussion? A. I did not start from simply the Bessonneau structure.

XQ. Well, is it your contention that Bessonneau 2,185,581 could be modified to come up with the Mackie-Duluk structure? A. Yes, but if you look at only this reference, it may not be really obvious.

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[755] XQ. Let us get into Bessonneau 2,157,783. Do you recall that you testified with regard to this patent that the rearmost end of hoop 60 is positioned by the fabric 8? A. Yes.

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The Court: I will anticipate what he is trying to prove. He is going back to the testimony the other day we had, somewhat extensively as I recall it, that the pressure that he stated was necessary in order to perform a seal here was largely supplied by the fabric and that if you were going to run the fabric down below the belt line of the car in order to achieve some of the points in the Mackie-

Duluk, you are going [756] to have to add to your mechanical structure in order to get the pressure, from which he will argue again we get into complexities. If you want to have any points beyond that, you may.

[759] XQ. Now would you agree that this patent does not teach a trough was in the car? A. That is right. There is no trough mentioned in here.

XQ. Does Mr. Bessonneau describe the provisions of a fender well here? A. No, I am just trying to answer the question.

XQ. Yes. Does Mr. Bessonneau describe the provision of any drains in the car? [760] A. No, he does not.

XQ. Now, in your discussion of this particular patent, you discussed how you would go about modifying it? A. Yes.

XQ. Now you said, first of all, you would modify it by adding a linkage at the rear of 60? A. That is right.

XQ. Would you agree that Bessonneau does not teach such a linkage at the rear of hoop 60? A. He does not show a linkage. I don't know exactly what you mean by teach.

XQ. Well, I meant show or discuss. A. All right. Yes, that's right.

XQ. Now you stated also, I assume, that one of the elements of your modification would be to detach the fabric from the rear portion of 60 and then attach it to the car. I am describing the Mackie-Duluk structure now. A. Yes. I think so.

XQ. So you would have to make that further change, then? A. Yes

XQ. Then, as I understood your testimony, you proposed to break [761] the hoop 60 up into three parts and eliminate the back part; is that correct? A. Well, this is a part

of attaching the fabric along the rear edge. I don't have to break it. I just noticed that I wouldn't have any use for the rear part of this hoop 60 and I could save the trouble of making it.

XQ. So what you are saying, in effect, is, that you are to attach the fabric at the rear part of the car, a part of the hoop 60 as taught by Bessonneau then becomes useless; is that correct? A. That is right, yes.

XQ. Yes. Then you proposed to change the shape of the fabric in the side quarter; is that correct? A. Yes.

XQ. And you proposed to extend the fabric down inside the car; is that correct? A. Yes, that is right.

XQ. Then you proposed to add a trough that is not taught by Bessonneau; is that correct? A. That is right, yes.

XQ. Then you proposed to attach this flap to the trough; is that correct? A. Yes, I think so.

[67] XQ. You have taken the position that you are an expert. You have also taken the position certain changes are obvious and simple. I am trying to determine whether or not these changes were so obvious to you immediately as an engineer or whether or not they were suggested to you.

I ask you, again, did you upon reading this Bessonneau patent suddenly realize that there was some great advantage to be derived by extending hoop 2? A. Yes, if you extend hoop 2 you can get the portion which is loose as shown in Figure 3 to come in better contact with the body of the car.

XQ. That is not my question. I am saying, did you realize it, you, of yourself? A. Well, the thing is, it isn't the first patent I read, I mean the reading of the patent indicated the desirability of having such a supporting hoop

2 all around and the desirability of having the pressure on the fabric all around.

* * *

[768] XQ. One of the early patents you read was the Mackie-Duluk patent? A. I think so.

XQ. Is it from your reading of this patent you saw the desirability of extending hoop 2? A. This contributed to the conclusion.

* * *

[773] XQ. I invite your attention to the British Bessonneau patent we have discussed, No. 447,641. I believe that you have testified that this patent shows a portion of fabric of the side quarter extending inside the car. A. Yes.

XQ. I believe you also testified that you drew this conclusion from the drawings? A. That is correct, yes.

XQ. Is there any portion of the specification which describes such a construction? A. That the fabric extends down below the body line.

XQ. On the sides. A. On the sides. Well, to my knowledge, my understanding is, at Page 3, Line 37, it has some such indication.

XQ. Page 3, Line 37? A. Yes.

[774] XQ. It just says the end of the canvas is fixed within the space provided for the folding hood in the rear of the vehicle body. How does it justify an extension of the flap on the side? A. I understand the specification "provided for the folding hood," that that is what is in the rear of the vehicle body and the end of the canvas. Of course any edge of the canvas can be considered an end.

* * *

XQ. Do you find any specific language concerning the side of the car? A. To some extent, when you ask me a question like this, I have to do a lot of reading before I answer.

XQ. I don't wish to make a statement on my own. I

would appreciate your reading it. I will expand the question so that if you find any language at all which is concerned with fabric on the side of the car, or any specific language concerned with the side of the car in any way, would you please identify the language, speaking of the sides, any language? A. I don't think I find any language.

* * *

[775] The Court: I don't blame you. Here, beginning at 25 in Figure 1 and going away around until you get to 26 is the fabric. You said you felt the dotted line beginning at 26 and extending to the left was also indicating the fabric. Am I right?

The Witness: Yes, that is right.

The Court: Where is the fabric in Figure 3, other than the heavy line?

The Witness: Well, we have the same kind of edge there.

The Court: You are pointing to the horizontal edge, corresponding with this wide strip?

The Witness: Yes, we have called it 5-A.

The Court: 5-A, yes. Now where is the edge that extends from 5-A upwards at the left-hand side, that end?

[776] The Witness: Well, I contended that edge coincides with the pillar 1, that there is an attachment to pillar 1, and I said this because the dotted line in the body line shown in Figure 1 suddenly becomes a solid line in front of the pillar 1, as the body structure falls, as shown in Figure 3.

This seems to indicate that something which was covering that body line is not there any more, as bow 1 moves clockwise and this something I think is most obviously the fabric.

The Court: So that there is a pucker which is not demonstrated in the drawing.

The Witness: A pucker.

Mr. Pollock: Pucker.

The Court: A fold, a series of folds.

[777] XQ. So the drawings themselves do not indicate that 26 goes on the side, is that correct? A. That is correct, yes.

XQ. There is nothing in the specification that indicates that 26 goes on the side. We have already looked for this question of sides. A. Yes, that is right.

[778] XQ. If you are contending that this fabric is fastened down on the sides, what is it fastened to? A. Well, it could be, it could be fastened to such a member as 26 on the sides.

XQ. I agree it could be, possibly, but do we have a member such as 26 on the side? A. It isn't shown in these drawings.

XQ. Again I ask you if the fabric is as you contend fastened on the side, what is it fastened to? A. To a member not shown in the drawings.

XQ. Is there any discussion in here that the fabric is fastened at all on the sides? A. Discussion, no. It is just my argument, which was Figure 3 would tend to show a wavy line, 5-A, instead of a straight line, 5-A.

XQ. That would indicate no fasteners. A. If I had a wavy line, 5-A, that is right, that would indicate no fastening.

XQ. You find no support in either the specifications or the drawings for your proposed fastenings on the sides? A. No.

[779] XQ. Except for that one consideration, do you find any other support in either the specification or drawings for your alleged fastening on the sides? A. No, I don't.

[780] A. Well, what I intended to say in my previous answer, is the fact you bring the fabric so low in the well of the body, maybe what effects a seal, such as water running down along the body line, as far as that is concerned.

XQ. Just the bringing of the fabric inside the car? A. Yes, the fact that the water is guided, controlled down to that level. Then it may be we have to prevent it from entering the car later on as it goes below that level.

XQ. And that guiding of the water is in your view one of the characteristics of the seals that we have been discussing? A. Yes, that is right.

* * *

[784] XQ. Is it not true that in the Ackermans patent the tension of the fabric alone is utilized in an effort to make a seal? A. At the belt line, yes.

XQ. Now does Ackermans provide any auxiliary structure whatsoever cooperating with the fabric at the belt line to facilitate in making this seal? I have particular reference to a structure such as the wiper arm of Mackie-Duluk. A. No, there is no wiper arm pushing the fabric—although I could conceive that the fabric flap itself could be strengthened by some kind of member attached to it.

XQ. This is your own thought, I assume? A. Yes.

XQ. Did you find anything in Ackermans to restrain the inward motion of the fabric other than in the tension of the fabric itself?

The Court: By inward you mean towards the center of the car?

Mr. Pollock: Towards the center of the car, yes.

A. I would say the same thing. I don't find such things, except for the solidity of the flap itself.

* * * *

[785] XQ. But in the particular structure that Ackermans shows in Fig. 9, I understand your testimony to be that if the fabric were permanently attached to this body

it would rip loose? A. Yes. This is a matter of speculation, of course.

XQ. Do you find any suggestion in Ackermans that the flap should or could desirably be extended all the way down to the trough 124? I am asking you for a specific reference to this patent. A. No, I don't think so.

• • •

[788] XQ. If we were to simply add a wiper arm to the Ackermans structure, is it not possible that wiper arm might engage the lower end of the relatively short flap 130 and push it out of place as the top is being raised? A. No. Again this depends on the rigidity of this flap 130.

• • •

[789] The Court: In other words, if it is a flap that will never pucker, then that's one thing; if it is a flap that will pucker, then Mr. Pollock's suggestion has some merit to it.

The Witness: Yes.

The Court: Right.

XQ. There are some special considerations, therefore, to be recognized when you are simply trying to add a wiper arm to Ackermans; is that not correct? A. Well, it also depends on the length of that flap.

XQ. Well, we are speaking of the flap that Ackermans actually shows. I believe you characterized it as a relatively narrow or short flap. A. That is, looking at Fig. 9,—

XQ. Yes. A. —that doesn't look as short in Fig. 10. It seems to me it's not the same size. I don't know.

XQ. Well, there are some special problems involved if you are adding a wiper arm, are there not? A. It all depends which one you start with.

• • •

[791] XQ. Is there anything to keep Ackermans flap from shrinking under conditions of continued use?

• • •

Mr. Pollock: Shrinking in an outward direction, out of the body of the car.

The Court: All right, you may have that.

[792] A. Well, the fact that sometimes in reality the tension between the pillar 22 and the point of attachment 132 produces a pull, a downward pull on the fabric in case it tries to shrink upward; so if there was such—

The Court: Only at the end, however: isn't that the case?

The Witness: Well, the pull between 22 and 132, we said, tends to maintain a straight line between 22 and 122.

The Court: A rather inefficient method of pulling down in the middle, is it not? In other words, you have lost pretty much your leverage.

Mr. Pollock: In the middle of the flap.

The Court: In the middle of the flap, halfway between the two points.

The Witness: Well, if there has been no shrinkage, you have no pull downward.

The Court: No. If there has been shrinkage the pull downwards, so far as the middle is concerned, is very slight, is it not? In other words, the pull is out.

The Witness: Yes.

* * *

[798] XQ. Let us take up the next patent, Mr. Brosens. The next patent, as I recall, was Best patent No. 2,289,173. A. That is right.

XQ. Does that patent have any troughs in it? A. No, it does not. No, I don't think it does have any troughs.

XQ. Does it have any wiping arms? A. No, this patent does not.

XQ. Does it have a portion of fabric coming down inside the car and permanently secured to the car?

* * *

The Court: Permanently means while the top is both

up and down and in between. In other words, it never has to be disturbed in connection with raising and lowering the top.

The Witness: No, this fabric has to be detached at the rear corner in lowering and raising the top.

XQ. In both operations, you have to actually have to do some physical attaching or detaching. Is that not correct? A. That is correct, I think.

* * * *

[808] XQ. Let us turn to this Omnia publication. If I were to hand you this publication as an engineer, you being the engineer, and ask you to reconstruct this structure, could you do so? A. The entire structure?

XQ. Yes. A. The power mechanism, I could construct you something, but given the great number of possibilities of such an arrangement I would say the chances would be I would not come up with what is actually under this.

* * *

[809] XQ. In the early part of your testimony, Mr. Brosens, you discussed what you termed two types of seals. A. That is right.

XQ. You said that the Maekie-Dulnk teaches a seal in the belt line and another seal down below, is that correct? A. I am not positive of that. I do not know what you mean by "teaches."

* * *

XQ. Did you not testify that no matter how much pressure is exerted in this region some water is bound to come through? A. Yes.

XQ. You did so testify? A. That is right; yes.

[810] XQ. Now we have another seal down below. You said the trough and the attachment of the fabric to the trough? A. Yes.

* * *

[814] XQ. Have you seen a car with a shingle on it? A. Yes.

XQ. From your understanding of the word seal, as you define it, would you be able to believe that that shingle structure at the belt line comprises a seal at the belt line? A. No, I would not. You are talking of a seal at the belt line.

XQ. What is your distinction?

The Court: I can make that myself, it is a substitute for a seal at the belt line.

XQ. Is 90 per cent of the water dispersed over the exterior of the car according to Mr. Shapiro? A. I would say that that is fairly accurate layman's language.

XQ. Where is the shingle actually located in the structure? A. Slightly above the belt line.

XQ. In all cases?

Mr. Wolf: I object, your Honor.

Mr. Pollock: It is our contention that when the shingle on these tops is there, every element of all the claims is met. In addition, we have a water shedding of at least 90 per cent at the uppermost portion of the car, which will [815] give us a seal in that region, as well.

I invite the Court's attention to the fact the shingle is part of the fabric itself, when the fabric moves the shingle moves. We have a lateral reading.

I am merely trying to get this witness to admit that.

The Court: Are you trying to get him to admit it is an equivalent?

Mr. Pollock: I am trying to get him to admit, assuming Mr. Shapiro's testimony is correct, with a shingle they get 90 per cent of the water over the outside of the car, that is within his definition a seal.

The Court: At the belt line?

Mr. Pollock: At the belt line, yes, your Honor.

The Court: If he said so, I would not agree with him.

It is a method of shedding water without having a seal at the belt line.

Mr. Pollock: I believe the question of a seal is how much water can get in or out.

The Court: No. If you keep the car in the garage and not allowed on it, would you have a seal?

Mr. Pollock: In so far as water getting into the trough.

The Court: Everybody who kept his car in a garage would be violating your patent.

Mr. Pollock: That is not my point.

[816] The Court: I did not suppose so.

Mr. Pollock: My point is—.

The Court: I think you are in the realm of equivalents and not in the realm of something more direct.

XQ. Inviting your attention to the Mackie-Duluk patent, I show you this patent and direct your attention to Figure 2. Do you see this fin 27 we have been discussing? A. Yes.

XQ. Is the upper surface of that fin operative to direct water over the outside of the car? A. I would say no matter what the shape of that member is, if it prevents the entrance of water between it and the fabric, that it will result in diverting water over the side of the car.

XQ. At least in so far as the upper surface of fin 27 is concerned. Can you say it has the same function with regard to water shedding that a shingle would have? A. No, in a shingle you have to be careful about the shape you give to it so that you project the water over the belt line.

I am saying in this case no matter what the upper surface of the member 27 is, if it is effecting a seal between the fabric and it, then the water will run over the outside of the car. The shape of 27 does not matter.

XQ. It does perform a water shedding function, though; is that correct? [817] A. No, I don't think so; by "shedding" I would understand you intend to deflect the flow in a [illegible] particular way.

The Court: Excluded.

XQ. Mr. Brosens, from your understanding of the Mackie-Duluk patent, if we were to eliminate the flap that goes inside the car and merely attach it outside the car, would there be any purpose in the trough 22? A. No, I would say, if any, very little. The only reason for my doubt is that at the very ends of the flap we may have open gaps where the water might get in, but that is all I would consider.

XQ. Would there be any purpose in the arm 10, the wiper arm 10, that is? A. No, I would say No.

XQ. Is it not true, therefore, that the only reason that the trough 22 and the wiper arm 10 perform the functions that they do is because the fabric comes inside the car and is adjacent to the trough after passing the wiper arm? [858] A. What do you call the functions?

XQ. I believe you described the functions of the wiper arm; and certainly the function of the trough is quite obvious. A. All right. Then my answer is yes, to your question.

XQ. Now, with regard to these functions of the wiper arm you have mentioned, you described two functions; is that correct? A. Yes.

XQ. One was to restrain inward motion of the fabric and the belt line, and the other was to attempt urging the fabric over into contact with the belt line. A. Well, my feeling is, urging is a loose word. I actually said, press the fabric against the resilient member with the same pressure.

XQ. Even if we have a gap at the belt line, is it not true the wiper arm is still fully performing its restraining function? A. You mean, if the fabric 20 is not in contact with the resilient member 27?

XQ. That's right. Let's say it's a quarter of an inch away. A. Then the wiper arm is restraining the inward motion of the fabric.

XQ. Is it not also true that the degree with which the wiper arm [819] performs its second function, as you defined it, depends upon how far the wiper arm pushes the fabric over toward the belt line? A. The second function being that of pressing the fabric against the resilient member?

XQ. Yes. A. If we say that at all times it is pressing the fabric against this resilient member with pressure, then I would say the amount of pressure has relatively very little to do with the degree of the function, and if we do not have such pressure between the fabric 20 and 27, I would say we do not have the function there altogether.

XQ. In other words, you would say that if the wiper arm is moved back, for example, it is no longer performing the function that you said it should perform, or was intended to perform? A. Inward in the car?

XQ. Yes. A. If it is moved inward to the extent that the fabric loses contact with the resilient member 27, then I say it is not performing its expected function.

XQ. How far inwards do you say it has to be moved in this connection? A. Until the contact is lost between 20 and 27.

XQ. But even when we do this, you say the wiper arm is still performing a function, namely, that of restraint? A. The inward motion of the fabric?

[820] XQ. Yes. A. Yes.

XQ. Now, just one further question. As I understand it, you said that the fastening of a fabric flap to a trough comprises a seal? A. Yes. That is, if the fabric is so arranged as to guide the incoming water into the trough. I mean, I could realize a fabric with holes in it. There is some common sense you have to keep in mind.

XQ. From your understanding of everything that has gone on, is that trough and the seal which is accomplished

with that trough located at the rear quarter of the automobile? A. Yes. That is right.

[822] *Redirect Examination by Mr. Wolf*

[838] Q. My question was, did you draw that particular flap based upon [839] your knowledge of flaps which you have seen in the prior art?

Mr. Pollock: Would counsel clarify what he means by prior art?

The Court: I think so, yes.

Mr. Wolf: Prior art—I had specifically in mind, your Honor—

The Court: Ask him what he had in mind.

Mr. Wolf: All right.

Q. What did you have in mind? A. Well, you asked me to draw a downward extension of the fabric.

Q. Yes. A. In the first Bessonneau reference. So I just drew a downward extension which doesn't interfere with the motion of the linkages shown in my drawing.

The Court: And then Mr. Wolf wanted you to tell him whether there is anything in any other reference we have been discussing the last few days that would suggest to you the positioning of the fabric in that manner.

The Witness: That is, extending it downward, or giving it this particular shape?

The Court: Extending it down, first off.

The Witness: I would say the Ackermans reference and the British Bessonneau, and the Best reference.

The Court: And is there anything that would suggest [840] this particular shape?

The Witness: No, you are free to choose the shape in the first Bessonneau reference, except for the front edge.

Q. That wasn't the question. The question was, Does

any of the prior art suggest this shape?

Mr. Pollock: No, the question was, What suggested the shape?

[841] Q. What prior art suggests that shape? A. Essentially, the Ackermans reference.

Q. All right. A. Also, the British Bessonneau has the same rearward leaning front edge of the fabric flap.

Mr. Wolf: Now, your Honor, I should like to offer in evidence that exhibit.

Mr. Pollock: Cognizant of the Court's ruling, I would merely like to repeat my objections on the same grounds.

The Court: Yes.

[Drawing marked Defendants' Exhibit SS.]

* * *

[851] Mr. Wolf: Yesterday Mr. Pollock requested that you point out specific language in connection with the Bessonneau patent which indicated provisions for a seal or closure in the side. I believe you pointed to certain language, I think it was Page 2, the first column. A. Which of the Bessonneaus?

Q. The first one, I believe. I believe there was language to the effect that the hoop moved vertically, is that correct? Do you recall that? A. That is right, yes.

Q. I believe you started to point out some correlation in this language to the drawings, but you did not finish. Could you do that right now, please? A. Yes. What I had in mind is that the view, the top view shown in Figure 2 describes the side of the body as a narrow construction, so that if hoop 2 moves essentially in a vertical plane, I would expect that it is, even after it reaches the belt line, it is still very close to the body panel, [852] if there is a body panel.

That there is a body panel seems indicated to me in Figure 7 where the support for the flap is shown. The flap is shown hinged on a plane which I don't think carries

any number. It is a plane which supports essentially the lower parts of the mechanism for lifting the flap.

This plane is actually on the inside of the belt line and Figure 7 suggests that this plane is quite in a vertical plane, because Figures 1 and 7 seem to indicate that plane 71 stands vertically upright when it is lifted and Figure 7 shows that the flap 71 is aligned with the plane that supports the flap.

This means the plate which supports the flap seems to be considerably on a vertical plane. So all in all it seems that this hoop—well, this is wrong, I have been confused, the plate which supports the flap is on the inside of hoop 2.

• • • •

I think I can summarize this. In that small area [853] between the outer edge of hoop 2 and the outer edge of the car, there seems to be a few elements which consist of vertically downward projecting planes. This suggests to me that hoop 2 actually comes close to something which could be a body panel. I thought at the beginning Figure 7 illustrated the actual body panel, but it does not.

• • •

[855] Mr. Wolf: Do we have the Omnia reference?

[856] Mr. Pollock: Here, use my copy [handing].

Q. The Court has requested that you point out in this particular exhibit where you considered the belt rail.

• • •

A. Well, I would consider the belt rail at this joint, where this is now the plate 71 mounted in the first Bessonneau reference; and this is the side of the car which in here is shown as a rather narrow body between the edge, the outer edge of flap 71 and the actual surface of the car. The pictures are not—

Q. Perhaps—

Mr. Pollock: I would like to hear the witness' answer.

A. The pictures are not of fair clarity but I think are

of sufficient clarity to indicate that the contour of the body actually continues the downward fall of the metal plate at the edge of 71.

[861] Q. In the modifications which you recently discussed in conjunction with the drawings, do you consider that the elements which you combine work the same or differently as they did in the original? Do you understand the question? A. Yes. The linkages I would consider were in the same manner. The only thing I would think could be called working in a different manner is the fabric itself. For instance, in the— Can I see my pictures? [Handed.] For instance, in the British Bessonneau we notice the fabric might very well be making a gap with the belt line. And in the drawing where I show the hoop 6 is incorporated, if the hoop 60 presses the fabric against the belt [862] line, in that instance the fabric would be considered as working in a slightly different manner. But I think this is the only kind of reservation that I would make.

[863] *Re-cross-examination by Mr. Pollock*

[865] XQ. Which of the several patents that you have been discussing do you believe teaches this particular concept?

Mr. Wolf: Objection. Which concept are you referring to?

Mr. Pollock: The conception of the drawing of the fabric well below the belt line and permanently fastening it to the car.

The Witness: Essentially the British Bessonneau.

[866] The Court: Mr. Pollock, just asked you what patent taught you or suggested to you, I take it that is what his language means—

Mr. Pollock: Yes.

The Court: —that the fabric should be attached to the tonneau.

Mr. Pollock: On the sides.

The Witness: The edge 5-A is fastened to the tonneau, it isn't a moving arm.

XQ. That is the main reference you are relying upon in that regard? A. If you restrict the situation to permanent fastening, yes.

• • •

[868] XQ. You have quoted from time to time from the Mackie patent. I invite your attention to Column 3, Line 10, in the construction shown in Figure 1:

> "The toggle arms fold up to the near straight line position and the wiping arm 10 with its struck-out boss 11 wipes against the top material 28."

Do you understand what Mackie-Duluk is speaking of by this wiping action? A. The only idea that forms in my mind as to wiping is like, if you have a cloth laying on the table flat and you bring an arm like 10 and sweep over the top so that there is always a uniform contact, then maybe this is wiping, the same way a windshield wiper goes over a piece of glass.

XQ. Accepting your definition of wiping, do you find any such operation in any of these patents you have been discussing with relation to an area below the belt line of the car. A. Do you mean I find wiping in these structures?

XQ. Do you find wiping in these prior art patents you have been discussing? A. I find wiping in no reference at all, I would not use the term [869] Mackie uses.

The Court: Do you find any motion comparable to wiping, let's not talk about—

The Witness: You mean comparable?

The Court: Comparable to what Mackie means, by what

we have assumed that Mackie means by wiping. Maybe that is a poor word.

Mr. Pollock: It may well be.

The Court: The concept is clear enough. You have been discussing it, do you find that concept in any prior art?

Mr. Pollock: You have shaken your head. Is that to indicate a "No" answer?

The Witness: No, it means I am—

The Court: Thinking.

The Witness: Looking. I do not know how to answer this. If you take, for instance, the first Bessonneau reference; hoop 2, if you have a body panel there, it wipes the body panel, I would say in the same way Mackie uses the term.

The Court: So that if the fabric wasn't attached to hoop 2 but was attached to the car, then you would wipe it. Is that what you are saying?

The Witness: Yes, it is a result.

The Court: Is there anything more than that, can you say?

The Witness: I can say relatively speaking now [870] looking at it from the other way, as the fabric which hoop 2 carries moves with respect to the belt line, you can say relatively speaking that the belt line is now wiping the fabric.

The Court: I am not assuming they are in contact, which I did not by my prior question but meant to.

Mr. Pollock: The conception of the drawing of the fabric well below the belt line and permanently fastening it

The Witness: Yes, if wiping includes contact.

The Court: I could not wipe the tablecloth 6 inches away.

The Witness: That is right.

* * *

XQ. Now in the Ackermans patent is it not true that

one of the prime purposes of that patent is to secure horizontal tension in the flap of the fabric?

[872] XQ. Is it not true that the tension in the fabric is obtained because of the method of securing the top material to the folding pillar 22?

Mr. Wolf: Objection.

Mr. Pollock: It is right in the patent I read.

Mr. Wolf: It is in the patent, it is obvious.

The Court: You don't need to ask the witness.

Mr. Pollock: If he makes this extension in the way he has suggested here, we will no longer be able to get the tension.

[873] A. Yes. You are asking me essentially whether when this [874] extended down flat at the belt line, you have longitudinal tension in the fabric, can I provide for it?

XQ. I said in this structure you have been shown here. A. Yes.

XQ. Does it occur? A. All right. No, I don't see any purpose for it.

XQ. Fine, thank you. You were speaking of the fact that you could add a wiper arm to Ackermans if you extended the flap lower, is that correct? I believe your actual words were, if you extended the flap lower the wiper arm would not catch or jam the fabric. A. To describe the possibility of catching the fabric and jamming it up.

XQ. You agree there is that possibility, first of all?

The Court: He did yesterday. Why ask him again?

[875] A. No, I have tried to see the motion of a wiper arm or hoop 2 when some of the edge of the cloth is above it. If there is a chance, a possibility for jamming, under certain conditions I would expect the possibility of jamming.

* * *

[878] Mr. Wolf: I believe that is all the questions I have of the witness, your Honor.

Your Honor, I should like to offer in evidence certain portions of depositions taken of Richard S. Wright and John Wharton, July 2, 1958, at Baltimore. Could I just read the pages to which I refer?

The Court: Surely.

Mr. Pollock: In order to save time, your Honor, I will offer the remainder. I would wish you to indicate the pages you are offering.

* * *

[886] EDWIN S. BOOTH, Recalled

Direct Examination by Mr. Pollock

* * *

Q. I hand you a document and ask you to identify it. A. This is a certified copy of the file wrapper and contents of a patent to Ackermans, No. 2,549,153.

* * *

[887] Mr. Pollock: I would have, if you hear me out. I do not intend to offer this as an exhibit. My only purpose is to have this witness testify as to what division this application was examined and who the examiners were.

I will show the Ackermans and Mackie-Duluk applications were copending and examined in the same division in the Patent Office by exactly the same men, for whatever inferences can be gathered from this proof.

The Court: I will take it.

[888] Q. Have you examined the file wrapper of this Ackermans patent? A. Yes, I have.

Q. Have you examined the file wrapper of the Mackie-Duluk patent, the file wrapper is now Plaintiff's Exhibit 2. I believe? A. Yes, I have.

Q. Do these file wrappers show in what division of the

United States Patent Office these cases were examined? A. Yes, they were both examined in Division 47.

Q. Is there more than one Division 47 in the Patent Office? A. No, only one.

Q. Do these file wrappers show who the primary examiner during the examination was? A. Yes, in both cases it was Mr. Kanol.

Q. Throughout the prosecution of the both cases? A. Yes.

Q. Do the file wrappers show who the assistant examiner in each of the cases were? A. They indicate only by the initials H.G., which were the same in both cases all through the prosecution.

Q. Have you found any indication in either file wrapper that these patent cases, these particular cases, were involved in any Interference proceedings? A. No, I have not.

* * *

[889] Q. Would you discuss Claim 6 briefly? A. As applied to the construction shown in Figure 7 of the Mackie patent, Claim 6 starts out the same as the claims we previously discussed by defining an automobile body with a lower metal body structure or tonneau having a body panel. That is shown in 4 in Figure 7 of the Mackie patent, a folding [890] body structure supported by the tonneau which is indicated in 1 in Figure 7 of the Mackie patent.

Flexible top material supported by the bow which is shown in 20 in Figure 7 of the Mackie patent.

With the top material at the rear quarter extending down secured to the panel on the inside and below the top of the metal body or tonneau.

That is extending flat, but apparently has no separate reference character, but which is the portion of the fabric below the wiper arm 11-A.

The claim continues, that the flexible top material spreading and adjoining the inside of the top of the side of the tonneau when the bow structure is raised, that language

is similar to the language in the other claims we have discussed and recites the operation of the extended flap portion when the top is raised.

Mr. Wolf: Excuse me, your Honor, I believe they have not pressed Claim 6; am I correct?

Mr. Pollock: We have not. Let me ask you this preliminary question on that point.

Mr. Wolf: My understanding—

Q. Did you realize what the structure of the General Motors car was like before you heard Harold Shapiro testify? A. No, I did not.

Q. Explain that. [891] A. The only General Motors cars I have seen were operating cars in which the top well cover had not been detached and with the top well cover in place the wiper arm at the rear end is hidden.

Mr. Wolf: Your Honor, my objection is very fundamental. We asked them in interrogatories what claims they were going to press, as a basis of infringement. They never said Claim 6 would be used and we never examined it.

Beyond that, there has not been direct testimony or anything so far to date relative to Claim 6.

All of a sudden they are pulling Claim 6 out of a hat. I have never read Claim 6, after we had what claims we thought we were said to be infringing.

The Court: You consider during the lunch hour as to how you are hurt.

Mr. Wolf: Pardon?

The Court: That is something else I am going to put to you to consider during the lunch hour, as to how you are hurt. I am deferring ruling on your objection at this time. I will hear you after lunch.

Q. Would you continue? A. The claim continues, a wiping arm attached to a bow and caused to wipe the inside lower portion of the top material and grip the top material when the top is raised, the said forward end of

the wiping arm shown in 10-A is pivoted to the [892] main bow 1 on a pivot point which is not numbered, slightly above the belt line of the car, apparently.

The claim then goes on and means for guiding the rear end of the wiping arm comprising a slotted bracket secured to the tonneau and through which the rear end of the wiping arm passes.

The bracket is shown in 18 with a slot 17 and the wiping arm as an extension 19 which fits slidingly through the slot 17.

In this way when the bow is moved up or down the extension 19 will slide through the slot 17 to accommodate movement of the arm.

Q. Does this claim in any way differ from the other claims discussed previously? A. It differs in the particular definition of the means for guiding the rear end of the wiping arm and also in that it says nothing about a seal.

Q. You don't find the word "seal" in this claim? A. Not in Claim 6, no.

The Court: You do find the words "grip the top material"?

The Witness: Yes, I do, your Honor.

The Court: Is there any distinction that you draw?

The Witness: The claim says that the wiping arm grips the top material but it does not say at what point nor does [893] it define any structure against which the arm might press the top material to grip it.

Gripping carries an implication of holding and in this construction the top material is actually held against and pulled out by its fastening to the body panel.

I think that perhaps the word is not well chosen in the claim. I am not frank enough to be sure just what it does mean.

The Court: What word do you think should be in there? I am not going to say this binds the defendant in any way.

The Witness: I think that the definition in Claim 5 is a much better definition of what actually happens where it says—

The Court: Go ahead.

The Witness: Where it says the wiping arm is caused to wipe the inside lower portion of the top material, to engage the top material and urge it toward the adjoining portion of the tonneau.

The Court: Why does it happen that you stop right there?

The Witness: And thereby provide a watertight seal between said top material and said tonneau.

The Court: Yes. I want to make a ruling at this time if we are going to consider Claim 6, the word "grip" [894] means just what you said, adding the clause I mentioned which you had stopped at.

Q. It is my understanding then you are reading the word "seal" into Claim 6?

The Court: I am.

Q. Have you had an opportunity to analyze the various references upon which defendants have been relying from the point of view of anticipation of the Mackie-Duluk patent? A. Yes, I have

Q. Would you please discuss the results of your analysis? A. In analyzing these references to determine if any of them contain all of the teachings of Mackie-Duluk and disclose all of the elements of Mackie-Duluk, I have determined that there are ten features involved in the Mackie-Duluk invention.

First, a low body structure having a panel.

Second, a folding body structure.

Third, flexible top material.

Fourth, a downwardly extending flap on the top material at the rear quarter.

Fifth, some means for securing the flap to the inside of the panel below the top of the body.

Sixth, the feature that the top material or the flap spreads and adjoins the inside top of the body when the top is raised.

Seventh, a rain trough on the panel below the body top [895] to which a flap is secured.

Eighth, a wiper arm which is secured to the bow structure at one end.

Ninth, a guide means for the other end of the wiper arm.

Tenth, this is a second feature, a wiping boss on the wiper arm. I include that. It is included in Claim 9 of the patent.

• • •

The Court: Before we do that I will like the witness to tell me what he means by "spreads and adjoins."

The Witness: That language is taken from the language of the patent, your Honor. As I understand it, referring for example to Claim 1, the downwardly extending flap which is designated 28 is in a folded condition, when the top is down. At that time the portion of fabric which will be in the raised position extended along the body line of the car, is pleated, if you will, or folded upon itself, [896] As the top is raised, that material is drawn forward by the bow structure and stretched to some extent, perhaps between those fastening points at the rear of the car and the bow structure, so that it is spread and straightened out and positioned adjacent to the belt line of the car, in the rear quarter.

The Court: You have told me everything except what I wanted to know.

The Witness: I am sorry.

The Court: It isn't your fault, it is the fault of my question. Is there any contact, is there a necessary contact implied in your word "adjoin"?

The Witness: Not as I interpret the term, your Honor. As I interpret the word "adjoins," it means positions adjacent to.

The Court: That is a relative term, then.

The Witness: Yes.

The Court: In other words, this building is adjacent to the building across the street, in one sense?

The Witness: Yes, in one sense.

The Court: Is that the sense you meant?

The Witness: Well, I think it would have to be a little closer than that in this construction.

The Court: How close?

The Witness: I do not know that that can be defined [397] in terms of—

The Court: You go ahead and tell me what you think.

The Witness: As your Honor said, these terms are relative and when we are speaking of a construction of that type, we have to determine what is meant by "close" or any other relative term.

The Court: Yes, aided of course by such language as we may find.

The Witness: That is correct, your Honor.

The Court: I am wondering just where you come out.

The Witness: With respect to the word "adjoins"?

The Court: Yes. How closely can you get any help from the language?

The Witness: No, I don't believe this term is defined in the specification.

The Court: Are we talking about the belt line of the car? I want to make sure we understand each other. Are we talking about the area of the belt line of the car?

The Witness: Yes, that is what I was referring to.

The Court: Yes. And the other side of that area is defined when the top is raised by the wiper arm?

The Witness: Yes, that is correct.

The Court: The question we are discussing narrows down to whether Mackie-Dulak specifies that that area shall be loose, firm or some other term.

[898] The Witness: Perhaps I can clarify at least what I had in mind, your Honor. I thought when you asked me about the meaning of the language, spreading and adjoining, we were referring to what happens to the fabric without giving any consideration to the presence or absence of the wiper arm.

The Court: All right. You are quite correct. You might have drawn that conclusion. That is why I am in doubt. I did not mean that. I meant, what does the patent specify in connection with the action of the wiper?

The Witness: Well, the wiper arm is described quite clearly in the patent and I believe in my previous testimony we referred to the language in Column 3 of the patent where it describes the wiper arm as pressing the fabric against the in-leaning fin.

The Court: Of course we have some claims here, I have in mind Claim 8. It is a question of torsion as distinguished from pressing it in.

The Witness: That language is strictly broader.

The Court: I am asking you what you have in mind as to your interpretation of this patent.

The Witness: With respect to the provision of a seal?

The Court: Yes.

The Witness: I believed I testified initially in my interpretation of a seal, it was at the belt line.

The Court: Yes.

[899] The Witness: It was a positioning of the fabric close enough to the belt line so that you would limit the amount of water which could enter at that point to an amount which could be carried away by the trough or second inner seal.

The Court: That is rather an elastic definition, isn't it?

The Witness: Yes, your Honor. I don't think I can define it in terms of inches.

The Court: No, I did not expect you to. I wasn't asking you to. I am asking you, if you can define it in terms of whether the connection was to be firm or loose, open or closed, and not looking at with a microscope, but some practical fashion, having in mind the testimony that the Ford Motor Company was content with a 1/8th inch opening.

The Witness: In my view, your Honor, assuming that the 18th inch opening was found by experience to limit the amount of water which could pass the belt line to an amount which would be carried away by the trough without spilling over and reaching any water damageable parts, then in by view the positioning of the fabric within 1/8th inch of it would constitute a seal.

The Court: That would be a very happy view for the plaintiff. In fact, I might conclude by saying, you would not be doing justice to Mr. Pollock if you did not consider in your testimony the possibility we are not going to do this.

[900] The Witness: It would be nice if we could always get people to agree with us.

The Court: You can consider the other possibility as well.

Mr. Pollock: May I comment on this?

The Court: Yes.

Mr. Pollock: On the question of what "adjoining" means, I believe some insight might be gained from reading the last clause on Claims 5 and 8.

The Court: No, I would not get any help from that. I have read them.

Mr. Pollock: You don't wish any more comment in that regard?

The Court: Any more comment, yes, but that particu-

lar comment does not impress me, that is all I would say.

Q. In regard to the question of seal, it is my view at least that the main purpose of the invention is to get an automatic seal at the rear quarter, which is the title of the invention, one that need not be manually fastened or unfastened when the top is raised or lowered.

The Court: I understand your overall claim.

Mr. Pollock: In that regard.

The Court: I am speaking specifically, when the witness testifies, that is why I brought this up at this time. When he testifies with relation to these other prior references, [901] I want to know what kind of seal he had in mind. "Adjoining" relates to the same thing, another way of saying the same thing.

Mr. Pollock: I don't believe so. I consider the word "adjoining" to be quite independent of the word "seal."

Taking your 1950 Chevrolet—your 1950 Plymouth, we have a loose flap at the back portion which is snapped on.

The Court: Yes.

Mr. Pollock: If that flap is laying over the outside, I would say we have a seal there in that water cannot get into the car. If it is hanging merely inside it, the two are still adjoining one another, we have no seal.

The Court: The important question is, do you have a seal within the meaning of Mackie-Duluk. Maybe it isn't the only question, but I consider it to be one.

Mr. Pollock: I believe the testimony will show Mackie-Duluk is not trying to get a better seal from the point of view of water shedding, than your 1950 Plymouth. I believe the Court can take notice, had he snapped the top—

The Court: In that case he would have a perfect seal, except in a hurricane.

Mr. Pollock: Exactly. The whole purpose was—

The Court: I don't think—I have Mr. Pickard's Ford with a 1/8th inch opening.

Mr. Pollock: I think not, no water can get into the [902] passenger compartment.

The Court: Through 1/8th of an inch?

Mr. Pollock: Through the passenger compartment.

The Court: You are talking about the whole case rather than the meaning of this particular language.

Mr. Pollock: It is my understanding from Mr. Brosens' testimony he considered the trough and the cloth fastened to it as a seal. He quite clearly testified this is a seal which might not be manually fastened or unfastened.

The Court: I did not hear him say the patent described is as a seal.

Mr. Pollock: He said he interpreted that as a seal, if that is a correct assumption, we have a seal at the rear quarter, whether it be at the belt line or below, which will properly prevent water from coming into a compartment and which need not require any human interposition.

In that respect we have an automatic seal at the rear quarter. You need not snap your fasteners or do anything else and water cannot damage the interior of your car.

This is a structure these people provided, the manufacturers themselves, the trough is in the car. Certainly it isn't meaningless, it was there for the express purpose of making sure that water cannot—

The Court: They provided something else. Maybe it wasn't needed. They leave you with a problem.

[903] Mr. Pollock: I believe it would be necessary, I believe it is important to get the fabric—

The Court: Mr. Booth said he was happy with a 3/8ths inch opening.

Mr. Pollock: I am not sure how happy he would be but for this suit.

The Court: Strike out "happy." He was willing to put up with it.

Mr. Pollock: That is true, that is what he did testify.

The Court: At the present time I was merely seeking some definitions, in my mind, as to what the witness has in his.

Mr. Pollock: I would much prefer to clarify the question of definition at this point, so that his testimony can be clearly understood.

The Court: I don't believe I have any question, so that there won't be any question in your mind, I think he has told me a seal in his understanding was any opening small enough to limit the water to where it can go down and be carried out by the trough.

Mr. Pollock: In that regard he is implying the cooperation I implied. I said—

The Court: I suggest to him if he wanted to do a good piece of work for your client, he better taken those possibilities into consideration in connection with his [904] testimony. There are two possibilities; one being the one he mentions and the other that the seal be a tight connection.

Q. Can you analyze the claims in that regard? A. I assume by "in that regard," you mean in discussing the references, we are also considering something, a seal in which there is a space through which water can enter.

Mr. Pollock: Yes. But I would understand from the Court's comments that you could consider a structure such as the trough in cooperation with such a space. Is that correct, your Honor?

The Court: What I am saying does not relate simply to this question, but other questions which I assume you will put to the witness before the day is over.

In other words, I am merely advising you of the possibility of my construing "seal" as something different from what you construe it.

Mr. Pollock: I understand that.

The Court: It relates to everything you want to ask him.

Mr. Pollock: Yes. In order to clarify this testimony, would you divorce yourself from the question of seal momentarily and merely consider the structural elements and then go back over the patents from the point of view of seal? A. I would be happy to do that.

Of the ten elements or features of the Mackie-Duluk [905] patent which I mentioned, all of the prior art references relied upon disclose the first three, namely, the bow structure, the folding bow structure, and the flexible top material.

Those three elements have been conventional in substantially all convertible tops which have been ever built. The fourth element, namely, the flap extending down inside of the vehicle body at the rear quarter and the securing means of the fifth element, I do not find in any of the references.

A flap extending inside of the body panel is shown in the Ackermans patent and perhaps also in the Best patent.

But there is no means in either patent for securing the flap inside of the panel below the top of the body.

The sixth feature of having the top material spread and adjoin the inside top of the body is shown in the Ackermans patent, where the flap does spread and adjoin the inside of the top of the body, when the top is raised.

The seventh feature, namely, a rain trough to which the top material is secured is not shown in any of the references.

There are of course rain troughs shown in several, such as the Bessonneau patent but in no case is there a flap of top material secured to such a rain trough.

The eighth element, the wiper arm I do not find disclosed in any of the references.

[906] I might say in that connection that I am defining

a wiper arm in accordance with the patent to mean an arm or element which actually moves over the surface of the fabric as the top is moved, from its lower to its upper position.

Invariably in the absence of a wiper arm there is of course no guide means for the wiper arm and no wiping boss on the wiper arm, so that those elements which constitute the important features of the Mackie-Duluk invention I do not find in any of the prior art patents referred to here.

Q. Would you go into the question of seal, first of all considering which of the patents teaches seal from the point of view of firm contact? Is that your understanding of the analysis you would like, your Honor?

The Court: Yes, in this connection. There are other entirely different inquiries you may make later or may not. I am not asking you to make them.

Mr. Pollock: The essential question after this would be the question of repair versus reconstruction.

The Court: All right, I am not directing the scope of the examination.

The Witness: With respect to a seal, the several Bessonneau patents, the several Bessoneau United States patents all seek to achieve a seal between the fabric and the body line of the car not by attaching the fabric to the body itself but by attaching it to a movable hoop element [207] which is moved as the linkage moves, to carry the edge of the fabric or individual element itself, or both, into contact with the car adjacent to the belt line.

If the hoop element and the belt line of the car can be made to correspond exactly in configuration and size, they would achieve a seal between them.

If there is any variation there would of course be the possibility of gaps of openings the same as those which

occur with the Mackie-Duluk structure and which would admit a certain amount of water.

Q. Where would that water go in the Bessonneau? A. In the first Bessonneau, No. 2,185,581, the water is intended to be caught by the troughs 79 and 80. There is, however, in this construction nothing which I can find to direct the water into those troughs.

Q. From your understanding of the patent is there a possibility the water might be so directed into the troughs? A. I would think very definitely and particularly with reference to the trough 79, which as shown in Figure 4 must lie outside of the bow structure when it is folded so that it would presumably be beyond the belt line of the car in a vertical direction.

Q. Would you adopt the two definitions that have been given this morning of seal, and characterize this as one or the other or neither of such seals? [908] A. I would say Bessonneau obtains a seal at the belt line in the same sense a seal is obtained in the belt line in the Mackie-Duluk patent.

The Court: In your interpretation of it.

The Witness: Yes, in my interpretation. Bessoneau does not, however, have the second or internal seal provided by the cooperation of the flap with the trough.

* * * *

[913] Mr. Wolf: With respect to the deposition of George Shapiro of September 5, 1957, I should like to offer the following pages:

Page 2, from the 8th line from the bottom to the bottom; all of page 3; all of page 4; all of page 5; page 6, line 1 to page 6, line 11; page 6, line 14 to the second line from the bottom; page 7, line 8 to the 6th line from the bottom; page 8—I'm sorry. Page 7 I would like to insert. Page 7, line 8 to the bottom of the page; page 8, line 1 to line 9; page 9, line 2 to the 3d line from the bottom; page 10,

line 10 to the bottom of the page; page 11, line 1 to line 8; page 11, line 11 to the bottom of the page; page 12, lines 1 to 4, and lines 12 to the bottom of the page; all of page 13; all of page 14; page 15, line 3 to the bottom of the page; page 16, line 3 to line 14.

[917] Q. What is the next patent you would like to discuss? A. The next one is the Bessonneau British patent No. 447,641.

In this patent, from the drawing it appears that the fabric extends below the belt line, in the sides or rear quarters of the vehicle body.

I find no indication in the patent that the fabric is attached in any way at the rear quarters. There is no [918] showing of the rear quarter construction.

I find it impossible to determine whether or not there is any seal or any sealing structure present.

Q. Can you make any more specific comment about this reference than that, if you are able to? I am not trying to lead you out, in that regard. A. The disclosure of the whole patent, in so far as the fit of the fabric into the rear quarters is concerned, is so vague it is almost impossible to go much farther than that.

Q. I see. What is the next patent? A. The next one in order discussed by the defendants is Ackermans patent No. 2,549,153.

In this patent in the rear quarter a flap 130 is provided which is connected at the forward end to the folding bow No. 22 and at the rear end to the belt line of the body.

When the folding bow is moved counterclockwise as seen in Figure 9 in raising the top, the flap 130 is stretched longitudinally and is intended to be pulled against the side of the body adjacent to the belt line.

Sealing elements as shown in 128 in Figure 10 are provided on the flap, which are intended to be drawn into

engagement with the belt line of the body to effect a seal.

The flap is completely unattached to the body in any way.

Q. Does this unattachment or disattachment have any important [919] aspects as far as you are concerned? A. Yes, the seal provided by Ackermans in stretching the fabric parallel to, or along the belt line, could not, it seems to me, be a very tight pressure and the fabric being cut on the bias at the quarter as has been discussed in the testimony is stretchable so that it would be quite impossible if not probable, that due to wind pressure this might be pushed into the extent where water could enter in excessive quantities and even in a direction which would miss the trough completely.

If that occurred the water would apparently reach water damageable parts of the vehicle.

* * *

Q. Does the problem of stretching at all come up in regard to the question of seal, the question of shrinkage, I meant? A. Well, yes, in this type of construction if the fabric should shrink in the rear quarter, it would tend to pull up on the flap element and it would not have to pull very far before it pulled the upper sealing strip 128 above the belt line.

In that event, an opening would be left which would be undesirable.

* * *

[920] Q. Does Ackermans accomplish sealing by the same structure that Mackie-Dulak does? A. No, in Ackermans the sealing depends entirely upon tension and the flap element 130 parallel to the belt line.

In the Mackie-Duluk patent the sealing is effected by pressing the fabric toward the belt line through the wiper arm 10, as shown in Figure 1.

Q. Does the attachment of a flap enter into this question of sealing at all? A. Are you speaking of Ackermans?

Q. Ackermans vis-a-vis Mackie-Duluk. A. In the construction shown in Ackermans it would be impossible to attach the fabric at its lower edge to the body because the fabric must be attached at the folding pillar 22, in order to obtain the stretch that Ackermans talks about.

If it were also attached at its lower edge to the body, when the pillar 22 is folded back the fabric would have to give somewhere, it would be torn loose.

Also if a flap of approximately the proportions shown in the Ackermans patent were secured to the body at its lower [921] edge, that securing would take away all meaning to the stretching effect that is described in the patent.

* * *

A. The next patent discussed is the Best patent No. 2,289,173.

So far as sealing is concerned, the Best patent teaches only the provision of extending the fabric a short distance on the inside of the body at the rear quarter and connecting it to the body through detachable snap fasteners or detachable fasteners of some sort.

In addition Best provides at the rear quarter extending over the outside of the belt rail a flap as shown in 61 which is similar to a shingle element in that water running down the fabric will tend to run over it and be carried to the outside of the body. I think that is all that Best is relied on for.

Q. Does Best have a seal? I think we are discussing seals here. A. The shingle structure 61 in Best keeps the major part of the water from entering the body and the portion of the fabric which extends inside and is attached to the inside of the belt rail also engages the belt rail.

These two cooperating together tend to form a seal at the belt rail.

Q. Is Best an automatic seal? [922] A. No, Best re-

quires manual attachment and detachment when raising and lowering the top.

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[927] Q. Mr. Booth, do you have an opinion as to whether it comprises a repair or reconstruction of the Mackie-Duluk combination to replace an original top fabric in a 1952-1954 Ford or a 1950-1953 General Motors car with an Aro replacement top fabric of the proper part number for that car?

[928] Mr. Wolf: Objection, your Honor.

• • •

[929] Mr. Wolf: I was about to say, presumably an expert in the field of patents.

However, the question presupposes, being an expert in the field of replacements. Actually in this area of installing these replacement fabric tops, I don't think you can divorce the knowledge of an entire industry from this problem.

• • •

Mr. Wolf: My understanding of the Goodyear case which I referred to in several briefs says in determining [930] the question of repair as compared with reconstruction, you must take into consideration the problem as a matter of common sense, you have to look at all the facts.

The Court: I will agree to that. I was just resting my hypothesis, when you said "the opinion."

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[931] *Re-cross-examination by Mr. Wolf*

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[933] XQ. You mentioned that this particular patent application to Ackermans, the patent application to Mackie, were handled by the same individual? A. Yes, that is correct.

• • •

[936] A. Well, in so far as the essential elements of the Mackie-Duluk patent are concerned, I don't think that the

Bessonneau references show any more of those elements than Campbell, for example.

XQ. You can see nothing in either of the group Bessonneau references which might perhaps be more relevant in considering the scope of Mackie than the Campbell and British references? A. No, I can't say that I do, really.

XQ. Would you consider the Patent Office remiss in their duties [937] in failing to cite some of the Bessonneau references in the prior art? A. Not particularly, because I don't believe that the things which were presented in the Mackie-Duluk applications are anticipated by Bessonneau.

. . . .

[938] XQ. Now, I should like you to turn to the claims of the Mackie patent. Would you indicate to me where there is any limitation to the shape of the bow or the length of the bow—pardon me—the shape of the wiper arm or the length of the wiper arm in the claims? A. There is no specific limitation to that effect.

XQ. Could you point to any specific limitation as to the length of the seal? A. There are none.

XQ. Could you point to any specific limitation as to the specific operating linkage? A. There are none of those, either.

XQ. In other words, you would agree with me when I say that, as to the wiper arm and seal and linkages which operate the wiper arm, any broad variety of linkages and wiper arm come within the scope of the claims; is that correct? A. Well, the wiper arm, I believe, in all the claims is required to be operated by the folding bow structure.

XQ. Well, with that limitation, there is quite a broad scope which would cover a great variety of wiper arms and shapes and linkages; isn't that correct? [939] A. Yes, that is correct.

XQ. Is there any limitation as to the shape of the flap

on the fabric which comes down into the body of the car? A. Not as a shape, no.

XQ. Is there any limitation which requires that the fabric be secured along the belt rail and the back and down below the belt rail at the side quarters? A. The latter limitation—

XQ. No, I'm stating— A. The first limitation you mentioned is not in the claims.

XQ. In other words, there is no limitation as to where the back portion is to be secured? A. That is correct.

XQ. Except as to claim 8, I believe it is, is there any limitation that the fabric had to be secured to a trough. A. I believe that is also in Claim 9—is it not? No, it is not in Claim 9. Claim 8 is the only one.

XQ. Is there any limitation in the patent—looking now at Claim 2, and I'm looking at this for comparison purposes—I'm sorry. Let us make it Claim 3. In line 4 it says, "and having the top material at the rear quarter extending down and supported by said panel. . . ." Is there anything in the patent which would clearly refute the specific language in contention, that this could merely mean touching and not necessarily absolutely fastened to the panel? [940] A. I think we discussed that when I was on the stand before, Mr. Wolf, the meaning of the word "supported", and I told you then that, when I first read it, I had construed it to mean attached; and I believe I agreed with you that it might possibly be construed more broadly.

XQ. It might be construed, for example, as the type we saw in the Ackermans patent where the fabric is stretched right up against the body of the car in the flap area and, perhaps seemed to be supported by the panel.

Mr. Pollock: I object, your Honor. I mean, if this is a question of argument, and it would seem this is merely argumentative, as to whether or not Ackermans does show something that is supported by—

The Court: Yes, I will sustain that.

XQ. Now you cited ten different elements that you considered in this Mackie construction? A. Yes.

XQ. Apparently, though, you didn't consider them all to be essential; is that right? A. Well,—

Mr. Pollock: I believe the word "essential" should be clarified, your Honor.

The Court: All right. If you have any troubles about it—what do you mean by it, Mr. Wolf?

Mr. Wolf: I mean essential to—well, I will re-phrase [941] it.

XQ. Essential to the claims? A. No, no.

XQ. Even the broadest claims? A. No.

XQ. Which of these do you consider as not coming within the scope of the broadest claims? A. Well, I think that all of the elements come within the scope of this claim, but I don't think that all the elements in their details are essential to comprise what is called for by the broadest claims.

XQ. Which of those can you dispense with? A. Well, several of the claims, for example, do not call for the rain trough. Those would be broad enough in their terms to include a construction in which the flap is atttached to the panel by some means other than through a rain trough.

XQ. How about the guiding? A. Yes, that is not included in some of the claims as a specific element.

XQ. That would not necessarily be an essential limitation under the construction? A. Those claims all call for the wiper arm. Claim 3, for example, says the wiper arm is operable simultaneously with the bow to accomplish its various purposes. Claim 4 says the wiper arm is attached at one end to the bow. Those claims are claims [942] like Claim 3 and are drawn more broadly to cover any means by which the wiper arm is mounted and controlled and moved in the manner called for in the claims.

XQ. Do you see any other that might be eliminated? A. Well, the wiping boss.

XQ. All right. You consider that to be—

Mr. Pollock: Your Honor, I am completely confused. I don't know where this is all going. I don't see the pertinence of it. The claims are written and they are in the case and they are here for this Court's interpretation. We are not trying to rewrite in the claims at this time.

The Court: Well, I suppose it's about the same pertinency as your original asking him to list them.

Mr. Pollock: List the elements?

The Court: Yes.

Mr. Pollock: I didn't ask him to list them, your Honor. I asked him to analyze them in the light of the art. He chose to list them.

The Court: All right. At least, isn't Mr. Wolf entitled to show any irreducible minimum in the witness' mind? I don't know just where it's going to get—by why not?

Mr. Pollock: Well, if that is the purpose, let him proceed.

The Court: What is your purpose, Mr. Wolf?

Mr. Wolf: Your Honor, I think brother counsel stated [943] at one point that if he had several things and one of the claims leaves out an element, then it is presumably held under patent law that element is no longer essential to the combination. In the absence of—

The Court: For that claim, you mean?

Mr. Wolf: The combination of the whole invention no longer is—

The Court: You mean, if I put in a claim with three items and put in another claim with only two, that knocks out my claim of the three items?

Mr. Wolf: It doesn't necessarily knock it out but—

Mr. Pollock: I believe the word "use", your Honor, is crucial. The claims are still of different scope, one being

infringement only when you have all three elements, and the other being infringement if you have at least two. However, when we are concerned with whether or not a given element is the essence of the invention, whether it is crucial, I believe the law is and does say that such a crucial element must appear in every claim, and in the absence of such appearance in every claim there is at least the presumption it is not crucial. I would defer to Mr. Booth in this regard, possibly, who has much more expertese in it than I have.

The Court: I know, but we have decided he can't tell us. Well, I will let Mr. Booth go ahead.

XQ. Will you agree with me, Mr. Booth, that the downward flap [244] which you have listed is of the same general nature as the downward flap of the Ackermans' patent? A. Broadly speaking, yes.

XQ. Broadly speaking—I presume you mean it is used to effect in part a seal at the body line; is that correct? A. Yes.

XQ. Would you also say it is used in part to direct water into a trough? A. Yes.

XQ. Now you also spoke of means for securing the flap below the body line on the car. Is that correct? A. That is correct.

XQ. Presumably you want to secure the flap of the fabric down below the body of the car so as not to give—well, let me coin an expression—of giving the fabric a shirttail appearance; is that correct? A. Well, as I understand it, there are several reasons for securing the fabric. Do you want to go into those, Mr. Wolf?

XQ. Well, can you briefly list what you consider to be the purposes of securing the flap? A. Well, one reason is from the standpoint of appearance, and you say, to keep the fabric drawn taut at the rear quarter so that it will have good appearance.

XQ. All right. What is the second? A. The second is that by attaching the fabric to the rear [945] quarter you insure that the fabric will always be in place and that it will not lie—

XQ. Isn't that the same one, the same as the first?

Mr. Pollock: Let him answer.

A. No, sir, I don't think so.

XQ. Explain the difference. A. It could be slack enough and still be secured so that it can't fly completely out of the car. I believe there was some testimony in the case that if it gets detached and the car is driven at a relatively high rate of speed, it would be quite possible for the wind pressure within the car to blow it completely on the outside. Another reason is that with the flap attached in the car, access to the interior of the car is prevented.

XQ. Now let me ask you a question. Are you familiar with the Best patent? A. Yes.

XQ. Is it possible, when that top is up and the car is moving for the fabric to fly loose? Isn't it secured for the same purpose? A. Yes. When the fasteners 59 are snapped, it is impossible for the fabric to fly loose at the rear quarter.

XQ. It serves the same purpose, then, as a means of securing? A. In that respect, yes.

XQ. You stated the top material spreads and adjoins. Presumably this is a little bit stated in the terms of function somewhat. [946] But would you agree with me the Ackermans patent, to the extent of the words spreads and adjoins is definite; also spreads and adjoins? A. Yes.

XQ. Now, getting down to the wiper arm, can you indicate what you consider to be the function of the wiper arm? A. Well, the wiper arm, according to the testimony in this case, has two functions. One is to hold the fabric against inward displacement, and the second is, to push the fabric out toward the belt line of the car.

XQ. Those are the two functions; correct? A. Yes.

XQ. All right. Turn to the Bessonneau patent and, for example, the first Bessonneau patent we looked at. Will you look at hoop number two? A. Yes.

XQ. Now we have presumably accepted that hoop 2 has fabric attached to it? A. Yes.

XQ. What I might say, you have also considered the second Bessonneau patent, 2157783? A. That is right.

XQ. And that is hoop 60, and I believe we have fabric attached to that hoop; am I correct? A. Yes.

[947] XQ. In both those cases does not that 60 in the second patent and hoop 2 of the first prevent the fabric from being pushed inward? A. Yes.

XQ. That is to prevent access? A. Yes.

[949] XQ. Yes, that's right. I believe you said that a trough was not suggested in the prior art, or did you say a trough was not suggested to which fabric was attached? A. The latter. That is right.

[953] XQ. Turn to the 447, 641. A. All right.

XQ. Do you question that there is a fabric on the sides of this construction?

The Court: He said there was.

Mr. Wolf: Pardon?

The Court: He said there was.

XQ. Do you agree that the lower edge of the fabric at the sides is indicated by the double line, the upper double line? I think we referred to that as 5-A. A. That is correct. No, I don't question that.

XQ. Will you agree that in all probability Figure 3 would show a forward edge to the fabric of the side quarter or would show a variation in the double line, the upper one of which is indicated in 5-A, if the fabric were not in some

way attached [954] either at the bottom or at the forward edge of the fabric?

Mr. Pollock: I am afraid I don't understand the question.

The Witness: I understand the question but I have no knowledge on which to base an answer, and answer to it.

I might say this, in answer to that question, Mr. Wolf, looking at this a little further, if the fabric were attached to the bow member 1 which I believe was Mr. Brosens' testimony, the line 5-A would apparently appear straight as it is shown.

Mr. Wolf: I see.

Mr. Pollock: What was that answer?

The Witness: I said if the fabric were attached to the bow member 1, at the lower edge here, its line would apparently appear straight as it is shown in the drawing.

[955] XQ. Your interpretation of the Mackie patent as you set it forth at the end of your testimony, you stated that in effect, as I recall, he was trying to achieve an automatically operated top which effected a seal at the side quarter. A. At the rear quarter.

XQ. At the rear quarter. I presume you do not contend that Mackie was the first to have done this? A. Well, so far as the testimony here has shown, it was the first commercial construction.

There were previous attempts.

XQ. I am asking you whether it had been done before. A. Do you mean done on paper?

XQ. Done on paper. A. Yes, it had been attempted on paper.

XQ. By whom? A. Bessonneau, for example.

XQ. How about Ackermans? A. Yes, Ackermans.

[956] Mr. Pollock: We are speaking of just that one.

the title of the invention rather than the structure; is that my understanding?

The Witness: Well, in answering the question it was my understanding we were talking about a top that was automatic in the sense it could be raised and lowered without any manual connection or disconnection of any fastening. Is that the question?

Mr. Wolf: Yes. You agree with me Ackermans incorporated, Ackermans provided a structure which accomplished this particular function?

The Witness: Yes.

XQ. Couldn't you characterize the Mackie patent concept, the principal concept then, as one in which Mackie was really concerned with effecting a really good seal at the rear quarter, the rear side quarter? A. I think his primary objective was to provide a top which could be raised and lowered automatically in the sense we have used the term.

XQ. You just told me that other people had done this. A. That is right.

XQ. Isn't it proper to assume or consider this device of Mackie's as something which is going beyond that step? Are you going to say that is all he was interested in doing? A. I was trying to say I think the automatic top was the [957] prime consideration in the patent as I read it.

XQ. What you are trying to say, am I not correct, what Mackie was trying to do was effect a really good seal and an automatic raising and lowering top? A. I think there had been good seals before, probably as good if not better than the seal obtained by the Mackie-Dulak construction but they were not automatic.

XQ. There were seals at the rear quarter which were automatic? A. Yes, that is correct.

XQ. Isn't the advance over those seals in the rear quarter at least to the extent you are claiming there is an

advance one in which are merely saying, all we want to do is get a better seal in automatically raised and lowered tops? A. I think it was a secondary consideration.

XQ. It was secondary to getting a good seal. You mean to say what Mackie wanted to do was merely get an automatic raised and lowered top? A. That was his prime consideration, yes.

XQ. How do you account for all the recitations in the claims and file wrapper, of this business of a weathertight seal which apparently he made so much of? A. One of the problems in any top is the provision of a watertight seal in the rear quarter. Mackie was trying to provide a structure simple enough to be built practically and used practically in commercial manufacture of automobiles to obtain [958] an automatic top and which would at the same time retain a seal structure in the rear quarter which would be good enough, not necessarily better than the seals which had preceded it.

XQ. It was an integral part of his consideration, that we do get a good seal? A. Oh, yes, that is necessary.

XQ. In the body line? A. Well, at the rear quarter.

XQ. Part of that is the body line? A. Part of it, yes.

XQ. I would like to ask you a couple of questions about the Ackermans construction. I would like you to indicate to me whether you agree that the Ackermans structure shows the following elements.

It shows a convertible automobile body automatically controlled folding top therefor, does it not? A. Yes.

XQ. It shows a tonneau having a body panel, does it not? A. Yes.

XQ. A folding bow structure supported by the tonneau? A. Yes.

XQ. Flexible fabric top materials supported by the bows? A. Yes.

XQ. It has fabric material on top at the rear quarter

extending down inside and below the top or the belt rail or metal body [959] or tonneau? A. Yes.

XQ. It has top materials spreading and adjoining the inside and the top or side of the tonneau when the bow structure is raised? A. Yes.

XQ. It produces a weather seal between the top material and the top and side of the tonneau? A. Yes.

XQ. It fastens the fabric top to the body? A. You are talking about—

XQ. Talking about Ackermans. A. The total top?

XQ. Yes, sir. A. Yes.

XQ. It shows a rain trough secured to the panel of the car? A. Yes, sir.

XQ. With the fabric or top extending at least partially down below the top of the metal body? A. Yes.

XQ. With the trough adapted to receive water passing between the fabric and the metal body? A. Yes.

XQ. And it has a deformable element or means effective to afford a weatherproof seal positioned between the adjoining [960] surface of the belt rail and folding top material when the bow is raised? A. Yes.

XQ. One more question. Does the Mackie patent at any place describe or show a complete fabric top? A. No.

XQ. It only shows small portion of it, is that correct? A. That is correct.

XQ. One more question. The portion of the fabric which is shown in Mackie deals substantially, exclusively with providing a seal at the rear quarter, is that correct? A. It shows—yes, I think that is correct.

Mr. Wolf: No further questions, your Honor.

Redirect Examination by Mr. Pollock

Q. Mr. Booth, is there any patent that has been discussed here including the Ackermans patent which includes an elongated flap extending down inside the car permanently fastened in place? A. No.

Q. Is there any patent here which shows a wiping arm? A. No.

Q. Do those two limitations appear in every claim in this case? A. Yes, they do.

Q. I ask you whether or not the word "seal" appears at every [961] claim in this case? A. In every claim that is in suit.

Q. In every claim in the case. A. In the Mackie-Duluk patent?

Q. Yes. A. We previously discussed Claim 6, in which that word does not appear. Claim 10 does not use the word "seal." Oh, yes, it does, I beg your pardon. Claim 6 is the only one.

The Court: May I call counsel's attention to the title of the patent?

Mr. Pollock: That is true, your Honor, we agreed that is the case.

The Court: You have to agree. I was just calling your attention to it.

[962] Q. In speaking of the Bessonneau patent you were directed to the hoop 2. A. Yes.

Q. Is it your understanding that acts as a wiper arm? A. No, that is a securing element to which the fabric is permanently and rigidly attached.

[964] Q. Have you had any occasion to work with patent drawings? A. Yes.

Q. Have you ever had them prepared? A. Yes.

[965] Q. Could you characterize them as very accurate? Withdraw the question.

Would you please discuss the accuracy of the patent drawings in general? A. Patent drawings are intended only to be illustrative. If they are accurate in the sense that mechanical drawings are accurate, it is pretty much ac-

cidental. There is no requirement that they have that degree of accuracy and the majority of them do not have it.

Q. Is it customary to draw any structural inferences from the drawings alone?

* * *

The Witness: In general, No, because, as I say, the drawings are supposed to be explanatory and unless the specific structure of an element or part is critical it is usually not even illustrated in any great detail.

* * *

[967] Q. From your understanding of the art, did anyone effect a convertible folding top with automatic seal at the rear quarter, to use the title of Mackie-Duluk by the structure shown by Mackie-Duluk in combination? A. No.

Q. You spoke of the fact that you understood Mackie-Duluk were trying to get a commercial structure, a feasible type structure for commercial production? A. Yes.

Q. Is there any feature of this structure which you believe [968] lends itself to that purpose? A. Of the Mackie-Duluk structure?

Q. Yes. Any feature, anything about the structure as a whole? A. The principal feature of the Mackie-Duluk in that respect is its simplicity.

The bow structure according to the patent and according to the testimony is purely conventional. In other words, the same bow structure that had previously been used with snap fasteners can be retained by the addition of the flap extending down inside the body and secured below the belt rail and the wip arm consisting in the form of Figure 1 of two simple links or in the from of Figure 7, of one arm pivoted at one end and a bracket to receive the other end slideably, all of the objectives were achieved so that it became very feasible as a commercial matter to adapt the existing top structures on a production basis to the Mackie-Duluk invention.

Re-cross-examination by Mr. Wolf

[969] XQ. You would consider the Bessonneau patents, then, to be somewhat cumbersome, is that correct? A. I would say they are far more complex than the Mackie-Duluk.

[970]

EIGHTH DAY
Court Room No. 6
Federal Building, Boston
Thursday, August 28, 1958
10:00 a.m.

EDWIN C. PICKARD, Recalled

Direct Examination by Mr. Pollock

Q. Will you state your name? A. My name is Edwin C. Pickard.

Q. Are you the Mr. Pickard who testified earlier in this proceeding? A. Yes, I am.

Q. Have you seen a structure of the type which was described in Mackie-Duluk in commercial automobiles? A. Yes, I have.

[971-972] Q. Will you state to the Court what you understand to be the important purpose of the aspects as you have seen it on the cars that you described? A. The construction that we are talking about is a much needed, long desired arrangement to provide a real automtaic top at the rear quarter of the car. This arrangement provided a flap or extension to the rear quarter which was anchored below the belt and was anchored and attached above. This condition was a tremendous improvement over what had been the prior condition because it was a completely auto

matic top arrangement as we understand it now in the industry.

I would like to state a little bit more about this from the engineering point of view because I feel it is a point on which I am qualified to speak. This arrangement I happened to be very familiar with because at the time I was in contact with—

Mr. Wolf: Your Honor, I must object to this.

The Court: On what ground?

Mr. Wolf: On the ground, first, of relevance. I don't think this is strictly relevant rebuttal testimony. Then there is the question of the time that elapsed here.

[973] The Court: If it took them a long time to figure it out, and they were, I would assume, among the top people in the country and the interested people, to figure it out—

Mr. Wolf: There is always the question as to figuring out what?

The Court: Figuring out what they have got, what else can that be, what else can they be figuring on.

* * *

[974] Q. I believe you were speaking of how long the people were working on this problem and the like A. Yes, I was discussing this device and the problems involved. The general industry had been for years working on the problem of sealing or closure.

Mr. Wolf: Objections, your Honor.

The Witness: At the rear quarter.

Mr. Wolf: How can he know what the industry is working on.

The Court: He has testified at length in his original testimony he kept himself familiar with what the industry was doing. I will admit they could be doing secret work, he would not know about. Are you suggesting he could not know what they were doing openly?

[975] Q. You were speaking of what the people were doing. A. I said the industry in general had been endeavoring for years to develop a better means of attaching the top fabric at the rear quarter.

I am qualified to say that. I worked with the people who make the fasteners. I worked with the people who make the fabric. We worked with the vendors who make other parts of the cars. They are constantly coming into the office. You would keep in touch with the general automotive industry through the vendors. If they had any new developments that would be pertinent to our new automobile—

[976] The Witness: The attachment at the quarter in the years gone by, we attached the fabric to the quarters by means of fasteners.

Originally we fastened with studs, as we call them, Durable Dot studs to be specific.

These studs had to be fastened and unfastened. Then we had as a development and an improvement a channel stud which was anchored to the belt.

This would permit this fastener to be released but you had to refasten it upon raising the top. This was found to be unsatisfactory and then the channel arrangement was designed with a cuff. The cuff arrangement was proved to be unsatisfactory because at times this cuff would stick in the channel and would not release.

The idea was, when the top was folded down, the top [977] would strip off from the cuff automatically but it would not replace itself automatically.

When you raised the top you would have to get out and insert the cuff under the channel. We found in some cases the cuff would strip off. There was a reinforcement on the bottom of the fabric, like an upturned piece of

fabric, that was inserted in the channels, that would in some cases strip off because of sticking in the channel.

These things are very annoying to the management. They have asked the Engineering to see what could be done for improvement.

In my section, as trim engineer, we had been thinking on the problem but really after trying various things never did come up with what we considered to be a completely automatic closure, a sealing arrangement at the same time.

Therefore, when the Mackie-Duluk arrangement was suggested and seen, immediately we recognized that here was a basic and fundamental construction that provided an automatic attachment of the fabric, that provided a seal in every station where we were needing this seal, and the management immediately recommended that this be used.

The Styling Department, as they were consulted on the matter, were delighted with this. This was because it took the fabric off of the outside belt of the car and provided a means for them to continue the belt molding around the automobile.

[978] Q. Is that the chrome strip? A. That is the chrome strip. That to them was a very improved matter, a very definite improvement in the style of the looks of the automobile.

Body engineering was delighted with this new arrangement because it was a very simple and inexpensive thing, from the drafting room standpoint. All that was necessary to do was to install this drain trough and to install a wiping arm and we were in business.

It was a very inexpensive change. The Trim Engineering Department were delighted with this arrangement because all we had to do in Trim Engineering was remove the cuff which we had trouble with anyhow and to extend the fabric on the quarter panel down to a point where it

could be attached on the drain and provide a reinforcement for that material which is a very simple change.

The Production Department also were delighted with this change because in the cutting and sewing room, the cutting room had very little to do except cut this material. It was less work than to cut the reinforcement.

The Sewing Section had less work to do, they did not have to make this complicated cuff and establish this cuff in a certain way on the bottom of the fabric, so the cutting and sewing were definitely improved.

The Shipping Department were pleased with this [979] because in the shipping of the tops from department to department and in the case of Mercury and Lincoln, where they had to be shipped to the plant, they could fold the tops into a small bundle. There was no heavy reinforcement at the belt. It was simply a soft piece of fabric.

The assembly line was delighted with this arrangement. It provided a means whereby this convertible top fabric could be applied on the car, the fabric could be attached to the rear belt, it could be attached to the windshield header and the number 4 rear bow and to the pillar and after it was all fastened the trimmer got inside the car. He merely held the fabric down and snapped it over the tabs, bent the tabs down and it was finished, and he installed the wiper arm. It was a very simple operation.

In fact the simplicity of the operation of this construction is its main feature and the proof of that is that it has been used on thousands of automobiles today.

* * *

A. The basic principle that was established is being used today.

Q. What are you referring to? A. The basic principle is that this fabric is attached to the [980] inside of the car body. It is attached to a point inside the car body below the belt to a point that creates a hinge so that when the

top is folded back the material never stretches and that is the only point you have to establish, where that hinge point is.

• • •

Q. Let us get back to the 1952-1954 Fords which is our main concern. Let us concern ourselves first of all with the rear quarter section. Now before this structure was put on the 1952-1954 Ford were there seals at the rear quarter of the convertible automobiles? A. Seals in the sense that they were attached to the outside of the car body.

Q. Sales in the sense that water could not get into the car? [981] A. Yes.

Q. Did these seals to a good job? A. Satisfactory, from a general standpoint. I would have to qualify that, Mr. Pollock. I qualify it in this way. You had a top, for instance, that had the fasteners on it. If the top fastener were the type that would strip off, that would make the top automatic, as it went down, the fastener stripped off from the sliding channel.

Now a rainstorm comes up and you have to raise your top. Assuming now you have the automatic features of raising the top, you can raise the top in the up position but if it is raining at the time, and many times the rain comes up quickly and comes in a downpour, you don't want to get out to fasten the top with the fastener. [982] Therefore, if you are driving along, this front edge could extend outward enough to scoop in water and therefore it would not be an automatic seal.

Q. I understand, Mr. Pickard, I am assuming you could do a good job. A. You could do a good job in that way.

Q. Did these '52-'54 Fords rear quarter structures do a better job from the point of view of sealing out water? A. Very, very definitely. This seal—

Q. Apart from the automatic features, did you keep more

water out? A. I would say we did, because there was nothing to do—you couldn't get water in. You didn't have to fasten anything, and you didn't have to depend upon the operator.

Q. That is to say, in both cases the same job was done.

The Court: In other words, it's already fastened.

The Witness: If it is already fastened, then it would be satisfactory in both cases.

Q. In other words, you are saying that snap fasteners didn't do a good job of keeping out the water. A. Or the cuff.

Q. Yes. You are saying these '52-'54 cars all did a good job? A. Yes, they did.

Q. Now, how important, to your knowledge, was it to fasten the flap to the trough for the purpose of sealing water out of the [983] car? A. Well, I would say it was important in this way. From a trim engineering standpoint, we would conceive of this arrangement that we have, if it was perfectly done, that you could have a good seal at the belt; but, as a practical trim engineer, we know that that perfect sealing at the belt is never done, or—I would say never done—I would say what we mean by never in that term, is that productionwise you couldn't find, if you put a hundred cars off the line, that you would have a hundred perfect cars. And in trim engineering terms, my experience has been that if Production has ten cars at the end of the line after producing one hundred, they are unhappy, and they come to us and want something done about those ten cars so they don't have to have those repaired. Therefore, we find that this is a very important feature.

Q. When you said, if you don't do a perfect job—what? A. If you don't do a perfect job of sealing at the belt, you still have the drain trough, and that is the reason the drain trough was put in there.

The Court: Would you feel if there wasn't any drain trough the seal wouldn't amount to so much?

The Witness: Well, I would say that is assumption, your Honor, because in trim engineering work—

The Court: Well, if you got ten cars and let the water through, you say that isn't going to please some of the [984] production?

The Witness: That's right. But, you see, we do have the drain trough.

The Court: My question is—I realize you are not a lawyer and you can't be expected to think as we lawyers do—but I am asking you to make the assumption that in order to save money you left the drain trough out. Would you be satisfied?

The Witness: Would I be satisfied?

The Court: Yes, with this device, if there wasn't any drain trough. Management came around and said, "We can save a dollar and a half by leaving out the drain trough—let's do it." Would you say, "Okay"?

The Witness: No, I wouldn't. I would recommend we leave the drain trough in.

The Court: Would you be quite forceful in your recommendation?

The Witness: Yes, I would.

The Court: All right.

Q. If management came to you and said, "We can save 10 cents by leaving off this flap attached to the rain trough", would you have any reaction to that? A. Yes, I would.

[985] Q. What would your reaction be in that regard? A. My reaction is, that we have a construction here that warrants the small expenditure that we are paying for; in other words, you're getting a construction that's completely

automatic, and you're paying very little for what you're getting.

* * *

Q. Have you ever seen a car with a fabric top with a cushion on it that had a gap? A. Yes, I have.

Q. How often would you say something like this could occur? A. Well, it could occur on every job; but we find that the [986] ordinary trimmer who has any interest whatsoever in his job would see that this did not occur; and we do have, however, people who do not have an interest in their job, and especially that is true on assembly lines where men are expected to do just simple, little sections of an operation. Therefore I would say that it could occur from time to time; therefore provision has been made in this particular case to take care of any eventuality.

Q. Including production errors? A. That's right.

Q. You discussed the question of access to the car, physical access to the car, during your early examination. A. That is right.

Q. Would you use this as merely a sales feature? A. No, I think that that is more than a sales feature. I feel that, if I was an owner of a car and any feature whatsoever was put on the automobile to deter a thief from getting into the car, I think it would be a good feature.

* * *

Q. From the point of view of sealing water out of the car, is it important that the fabric at the belt line come into contact with the belt line? A. It is desirable.

[987] Q. Is it important, though? A. It is not essential.

* * *

[989] Q. Now have you ever water-tested a '52 or '53 Ford in this manner? A. Yes, we have.

Q. To your knowledge have you ever water-tested such a car that had a gap at the belt line? A. Not an appreciable gap, no, in the Engineering Department.

The Court: I sustain Mr. Wolf's objection.

* * *

Q. Mr. Pickard, I invite your attention to Bessonneau patent #2185581. Have you ever read that patent?

Mr. Wolf: Your Honor, I object to his testimony with respect to patents.

The Court: Let us see what he has done about them.

Q. Have you ever read this patent? A. Yes, I have.

Q. Did you understand this structure from an engineering point of view? A. Yes, from the engineering standpoint I understand it very well.

Q. Have you ever seen a structure like that on a commercial automobile? [990] A. No, I have not. I don't think there would be one.

Q. From your understanding of the structure, can you tell me any problems that might arise from the commercial production point of view? A. In the rear quarter section I can anticipate many of them.

* * *

[991] Mr. Wolf: Your Honor, I also have another objection which has been quite apparent. It is my understanding of a trim engineer—at least this is what I have been told—is, they don't necessarily design linkages in this type of arrangement, they are practical engineers.

The Court: You may step right in now and ask him what he knows of linkages.

Mr. Pollock: Would you like to ask him about his qualifications, please?

Mr. Wolf: All right.

Cross Examination by Mr. Wolf

XQ. Have you ever had any experience in the design of linkages? A. Yes, sir. I have worked with a body engineer and draftsman for 35 years in the drafting room.

XQ. With what company? A. I worked with the Hupp

Motor Company, I worked with General Motors and Fisher. I worked with the Packard Motor Company, and I have worked with Ford. And in every case we have had, I have [992] had to personally go into the drafting room and lay over the board with the men who are developing convertible tops, and not only convertible tops but every other kind of automobile that is built today or that has been built.

XQ. Have you designed linkages? A. No, I did not design linkages personally.

XQ. Do you understand the nomenclature of linkages? A. Yes, I do, very well.

XQ. Did you understand the testimony with respect to linkages that Mr. Brosens gave? A. I certainly did. I think I understand more than a man who studied it for six months. I've been working in the drafting room for 35 years.

[997] *Limited Examination on Qualifications by Mr. Pollock*

Q. How long have you worked with the drafting rooms? A. 35 years.

Q. During this time did they do any linkage work? A. Yes they did

Q. Did you understand what they were doing? A. Yes, I do. I have understood it.

Q. Have you ever watched these men actually doing linkage work on the boards? A. Yes, I have to lay over the boards and work with them on it.

[999] This simplicity of linkage is for someone who does not know what linkage consists of in a convertible top and what elements are involved. It is a complicated piece

of mechanism. We put the very best engineers we have in the body engineering department on convertible tops.

* * *

[1001] All of these considerations, your Honor, are a tremendous problem which cannot be designed or cannot be done sitting here in this chair by me or any other person. They are considerations that are just not evident.

Q. I will get into the difficulties of the problem. We are examining your qualifications right now. Did you understand what these people were doing when they were working on the models? A. Yes, I did.

Q. Did you understand the problems they encountered? A. Yes.

[1002] Q. Did you understand the solutions they proposed? A. Many times I had to propose the solutions.

Q. You have actually proposed solutions involving linkage? A. Yes.

Q. Do you feel you are qualified to make any suggestions? A. Yes.

Q. Did your people accept your suggestions? A. Yes.

Q. Were they found to work? A. Yes.

* * *

[1003] *Examination on Qualifications by Mr. Wolf*

* * *

[1004] Q. Would you think you could go in and design these original linkages? A. Yes, I could.

Q. Could you actually go in from scratch, as far as you are concerned, and design completely these things? A. Yes, I could.

* * *

[1005] Mr. Pollock: Would the Court rule on this man's qualifications?

* * *

[1006] The Court: I will take it.

Direct examination by Mr. Pollock, Resumed

Q. Reading the Bessc ieau patent, I invite your attention to the hoop 2 of the Bessonneau patent 2,185,581.
A. Yes, sir.

[1007] Q. Have you had any practical experience with attempts to machine a part or manufacture a part of this general type? A. Well, I have had practical experience in trying to develop a part that would wrap around the body in a way similar to what this might be.

* * *

[1008] We found that with three-piece construction we could not even then match the bows and they use five pieces, using a corner piece, a side piece, and rear piece.

The Court: Go ahead.

The Witness: That is not the only defect with this particular arrangement here, to me.

Q. Speaking of Bessonneau? A. The Bessonneau. To me this is entirely not a production type of thing at all. If you brought this to me as a trim engineer and submitted it I would say it was, it just did not even have the principles that I would want in a production automobile.

* * *

[1010] The Court: Just as soon as you get to combinations, I will admit the scope of the testimony that this going to get into, and the scope of the cross-examination, rather terrifies me.

But leaving that practicality aside, just as soon as you get into talking about what the combination teaches and this witness sits up there and says it is very simple, we draw the line that way and poke the linkage that way and presto, you have something, I think the plaintiff has a perfect right to meet that in a number of ways. It seems to me this is one of them.

* * *

[1011] The Witness: I would like to call attention to

this hoop, as I see it. It is indeed very impractical because of the fact that it could not be trimmed or covered with the top fabric, without a number of things.

* * *

[1013] A. Well, that has to do with this hook. We have a linkage here that we would consider, that I would consider in engineering is absolutely useless. You see that long linkage? Now, if you anchor something on her, it means you've got a very loose control.

* * * *

Q. Yes. Mr. Pickard, from your experience in linkage work, have you considered that the Bessonneau linkage is simple? A. No, I would say it is very complicated. Not only that—I would say this particular linkage as it is shown here is impractical and impossible to use in the present-day automobile.

* * *

[1014] Q. I believe you characterize this as a complex linkage? A. Yes, I did.

Q. Were you present yesterday when Mr. Brosens was commenting on that linkage? A. Yes, I was.

Q. Did you hear him testify it was a simple problem? A. Yes, I did. I feel he only testified that because of his lack of knowledge of what constituted a job. I will point out a few things concerning this linkage that I am sure it's very evident.

* * *

Q. Is there anything different about the body of this automobile [1015] from the present day automobile? A. Yes, there is. This is not a presentday construction at all. And another thing, these bows, if you look at the way they are folded in Fig. 4, you'll see that this is not a practical construction. You have your header bar coming right down on top of your pillar, which would chafe the fabric, and it wouldn't in my opinion bind at all. Also, bow number 4

is right underneath another bow and it couldn't be a practical job. As I see this, it's not a practical job in any way, shape or form, and it's an only one-car deal.

Q. Mr. Pickard, do you know of your own information what calibre of man technically the automotive field applies to linkages? A. They apply their best men on convertible top linkage.

Q. Is it considered a difficult problem? A. Very difficult. It is most difficult for the reason that there are so many problems in effect. It is not a simple linkage problem, such as you have in a mechanical linkage. A mechanical linkage is something in a straight line that does a certain thing, and that is very simple and easy to figure out because you only have this straight linkage to be involved in. But on a convertible top you have a side-twisting of this top as it comes down. You have the fact of this cover which has an effect on it. This cover is attached across the job, and that is something that most people forget. And the effect of that [1016] material. You can see between the front section that the top is rippled, the next section is straight, the next section is rippled, and so on. And that may be true in any given case, but it is not true in every case. Therefore, you have to know what the construction is and what the elements involved are. And to sit here and to make any decision as to what would take place if you did something, I think it is pure presumption and shows a lack of knowledge of the elements involved.

[1017] Q. Mr. Pickard, I hand you Bessonneau patent #2157783. Have you read that patent? A. Yes, I have.

Q. Did you understand it from the engineering standpoint? A. From an engineering point, I do understand it.

Q. Now, Mr. Pickard, have you ever seen a structure such as this on a commercial automobile? A. No, I have not.

Q. Or a production automobile? A. No, I have not.

Q. Now, Mr. Pickard, if you see any difficulties in this I wish you would comment on them. However, if they are merely repeats of some difficulties you have spoken about before, will you so indicate and then address yourself to any new difficulties? A. Well, I would say that principally it hasn't the difficulties I pointed out before in that the hook bow number 60 is very difficult. It also has no means whatsoever of attaching or holding it in proper location at the rear edge. It had the same difficulties with the folding of these bows—

[1018] A. I would say that this construction here, as I pointed out, is principally the same fundamental things that are wrong with this top as with the other, in that the—

The Court: Well, if they've the same, let's not repeat them.

The Witness: All right.

Q. Do you have anything else to say about this Bessonneau patent? A. No.

Q. I hand you Ackermans Patent 2,549,153. Have you read this patent? A. Yes, I have.

Q. Did you understand it? A. Yes, I believe I do.

Q. Have you ever seen a structure such as Ackermans' disclosure on a commercial automobile or a production automobile? A. No, I have not.

Q. I invite your attention to Figs. 9 and 10 of this particular structure, and I ask you to comment on whether you see any difficulties with the structure from a practical point of view? A. Yes, I do.

Q. Would you please tell us what they are? [1019] A. The difficulties in this construction here is, that first of all it has no positive means of sealing at the belt—in this respect. Unless you assume that you have a belt rail, indicated here as number 132, and that this belt rail is entirely straight, and that the tension on the fabric from

front to back is such that it would hold the material adjacent to the body; and then you have got to have some more assumptions—

[1020] The Witness: Now, if we did do that, then you must assume that this material, when the top is raised, is always going to lay out against the body panel No. 128. This assumption is something that is not practical at all from a trimmer's standpoint because, when you fold this top down as indicated in these constructions here, the material in that area necessarily ripples or folds in two folds. Now—all right.

Then, if it does, when the material returns to the upward position, that material can also be curled, it could be curled in, it could be curled out. There's no telling what takes place in this top material when it is folded down. Therefore, you are not assured of a seal at all times with this type of arrangement.

The Court: Ackermans suggested there was going to be [1021] some tension there and that would tend to draw out those puckers.

The Witness: Well, you can build tension in a fabric—assume that you can build this tension, you can tell the workmen you've got to have this tension, but what assurance have you got that the workmen will put that tension in it?

The Court: That is really going to be a question of the shape and design of the fabric, is it not?

The Witness: Well,—

Mr. Pollock: The point is the tension to the low.

The Witness: No, the point I'm making, your Honor, is; you are depending upon tension front to back, you're depending upon an element—a human element.

The Court: Very well.

The Witness: And if the workman does not put the proper tension on, well, then you're in trouble.

Another thing you're depending upon, your Honor, is, this seal or this arrangement here is sewed or stitched to this lower flap. If you will see some of the sewing that's on the ripples that you have here, or other sewings that we have in automotive use, you will notice that the sewing is not all perfect. Therefore, you would be depending here upon a flap which is only extended down without any effort whatsoever to draw the wrinkles out to keep this seal properly placed against the body panel.

We have also found in an arraingement like this it is [1022] not secure against water leaks. We have done considerable work, your Honor, and I have been out many times around the test track. We often do that. We have a test track at Ford right behind our building; and then we have them out in other locations. And we have to go out to ride-test these cars, as well as to engineer them; and I must go out, your Honor, with test drivers, who may not be satisfied with Pickard's decision, they must be satisfied as test drivers to criticize my work. And therefore when we would go out— and we would have an opening in a top such as this—what we do—

Q. Where is the opening? A. This opening is between the panel and the flap because it is not attached securely.

Q. Well, how are you going to get an opening there? A. I mean, we don't have it permanently attached.

Q. To the trough? A. To the body, in any way.

* * *

[1023] Q. You are speaking of the flap? A. The Ackermans flap. Under certain conditions where you have a soft cloth and you would have a rain, this could very well blow this flap in beyond the drain trough and to deposit the water into the damageable parts of the automobile.

Now, we have had that definite experience; so that we

know we must have more than just a hope-so seal, as we have here, under ideal conditions. And that's what we have developed, and we have now an automatic seal that does work.

Q. What makes that automatic seal? A. This is not an automatic seal. This is only a hope-so seal.

Q. What's the difference in Mackie-Duluk? A. In Mackie-Duluk the fabric is attached directly to the drain trough and, as attached securely to the drain trough, providing a definite means of catching the water that goes in between. It [1024] also restricts the wind from blowing the fabric in beyond a limited point; and it is a definite, positive seal. We never had trouble with the water in this arrangement.

Q. Now let me ask you a question. Is there any shrinkage problem in the rear quarter of Ackermans? A. Yes, there is. There would be a shrinkage problem here. We find the fabric unattached that will shrink more than if it is attached; therefore, you would likely have a shrinkage problem in here to such an extent that the seal number 128 could very well be above the belt line and therefore would take the sealing member right out, make it ineffective, especially at the center of this opening.

Q. What would happen to the bottom of the flap 130? A. The bottom of the flap 130 could very well curve in or out. There is nothing here, unless you have a metal stiffener in there, that would insure that it would be straight down and would bear against the panel or drain trough 128.

Q. I'm speaking of the shrinkage of the flap. What could happen to that? A. The flap would raise the bottom end up and make it more vulnerable for the water to go over the top of the drain trough.

Q. You mean, the gap would be greater? A. The gap would be greater.

Q. Now, Mr. Pickard, are you able to comment whether or not a wiper arm could be simply added to the structure to make it [1025] operate in the way of Mackie-Duluk? A. Yes, I am able to comment; and I would say, that a wiper arm on this construction would not be practical because of the fact that the wiper arm should come below the drain trough, and, if that was the case, you would have to put an offset in the wiper arm, which would be a complicated mechanism; and, also, the wiper arm might catch the bottom of this extending flap, and if it did then you would be defeating your purpose. The wiper arm just doesn't fit into the situation.

* * * *

[1029] The Court: Well, so far as their being adjusted is concerned, Mr. Shapiro testified he was thoroughly familiar with the field and nobody ever adjusted them.

Mr. Pollock: I believe this witness is going to contradict that testimony; that he has actually observed '52 or '53 Fords where there is no appreciable gap at the belt line, so some adjustment must have occurred.

The Court: Well, at least for the purpose of rebutting what Mr. Shapiro said, why isn't it admissible, Mr. Wolf?

* * * *

[1031] Q. Mr. Pickard, you have testified that you saw some '52 or '53 cars with no cushion which did have an opening at the belt line? A. That is right.

Q. Did you also say that you had seen some that did not have a gap at the belt line? A. Yes, that's right. Did not have a gap at the belt line.

* * * *

[1032] Q. Mr. Pickard, let's go onto another subject, please. Did you in your observations observe any cars with a wiper arm which had a shingle on the replacement top fabric? A. Yes, I did.

Q. How many such cars would you estimate you saw?

A. I would estimate, with the shingle and the wiper arm, likely in the nature of 25 or 30 cars.

Q. Where were the shingles with relation to the belt line on the cars that you observed? A. The shingle was adjacent to the belt line, backing up the [1033] fabric.

Q. Was there a gap between the shingle and the belt line? A. Yes; in most cases there was a gap between the belt and the fabric.

Q. Were there any cases where the shingle was sitting right out at the belt line? A. Yes, there was.

Q. Now, when you speak of a slight gap, do you have any idea what that would be in dimension? A. Yes, I measured a number of those, and we found that the gap would range from the fabric up tight to the belt rail—

Q. I'm speaking of the shingle now. A. Yes, with the shingle on. And we found some as much as— We found one car which was ¾ of an inch away or more.

Q. What was the smallest gap? A. Essentially up to the belt.

* * * *

[1036] Q. When you were at the Western Auto Store, did you have occasion to buy any other product? A. Yes, I bought a patch kit.

Q. I hand you a kit with a sales slip on it. Will you please identify it? A. This is a kit entitled "Iron-on Convertible Patches." It is produced by the Western Auto Associates Store. It was purchased at 561 High Street, Dedham. It was purchased on August 18, 1958.

Q. Do you know how long products such as this have been on the market? A. Yes. This sort of thing has been on the market for a good many years—ever since we have had tops, in fact.

Q. This is a heat sealing attach, is it? Is that a form that has been long on the market? A. No, it hasn't always been heat sealing except since heat sealing patches have

been invoked. That is still a number of years back. But another method of accomplishing the same thing [1037] is using a piece of regular top material and cementing it on as you would putting a patch on a tire. You cement both sides. You cement the patch and you cement the top and then you put them together.

Mr. Pollock: I would like to offer this in evidence.

* * *

The Court: I will take it.

[Two Iron-on Convertible Patches marked Plaintiff's Exhibit 26-A and 26-B.]

* * *

[1038] Q. Mr. Pickard, I hand you another item, and I ask you whether or not you can identify this? A. Yes, this is a 1958 catalog of Pep Boys Auto Accessories.

Q. I ask you to turn to page 22, I believe it is. A. Yes.

Q. Are there any products advertised on that page which are pertinent to our present discussion? A. Yes. They advertised a top coat, a convertible top repair outfit, and a convertible top dressing.

Q. What is this repair outfit to which you refer? A. Well, their advertising set "makes this a fast, easy, waterproof, permanent repair job, that it contains 72 square inches of top fabric patch, bottle of cement, and an easy-to-use applicator. Also great for attaching tarpaulins, boat covers, canvass, etc. Do it yourself and save. Price 98 cents. Have tan and black."

* * *

[1040] Q. Have you had occasion to call Aro Top Sales Company, one of the defendants here, with regard to patching? A. Yes, I have.

* * * *

[1041] Q. What did they tell you? A. They assured me—

* * *

Q. Would you go ahead, Mr. Pickard. What did this

person tell you? A. I asked the question, if I had a 1953 Ford and had a small hole in my convertible top fabric, if they could sell me a patch kit that I could put on; and they said no, they didn't have them, but they could install a patch on the top quickly if I would bring the car over—it was a very small job, and they would fit the material to the hole and cement the patch in place.

* * *

[1044] Q. Mr. Pickard, have you had any experience with the patching of [1045] tops? A. Yes, I have.

Q. Can you tell me when this is done and whether it is a usual procedure? A. Well, usually the patching of a top is only done when you have a small hole—like, for instance, we have had severe hail storms in that area, in which some of those large hail stones would go directly through the top and create a small hole which might be a quarter of an inch in diameter, or 3/8 of an inch in diameter, different size holes; and in that case, if you have a good top, you can have a patch installed on that top, and it has been done and is being done regularly.

Q. Do you know over what period of time it has been done? A. It has been done ever since we have had tops. And may I state further?

Q. If it is pertinent to this inquiry. A. At Ford Motor Company we also repaired tops of that nature. If some accident had happened to a convertible top that is on test if somebody, if a top is down, laid tools in there and put a hole in there, we patch it, or we may take off the top and install a new section of material in that area.

The Court: Does it look well?

The Witness: It don't look as good as a new top, your Honor.

The Court: It's rather conspicuous, is it not?

[1046] The Witness: Well, it depends on the new top, how discolored it was. Actually it wouldn't be too conspic-

uous if the top is relatively new and the patch matches the fabric.

The Court: Would you say that it was the fact that the ordinary customer who was going to buy a top car with a convertible top is interested in the appearance?

The Witness: Yes.

The Court: Relatively speaking, a new top doesn't cost too much in proportion to the outlay that he has made in the car, does it?

The Witness: That's right. And yet, some young men have convertible tops who do not have an excess of money to put on a new top every time they want it.

The Court: I think I would take judicial notice of the fact that there are some young men that would drive cars in a condition that are offensive to the eye, as you described it earlier.

The Witness: That's right.

The Court: I don't know that that solves the problem at all. Don't you think, or do you think that persons who have relatively new cars and not jalopies or what-have-you, are conscious of the top as being a conspicuous part of the car?

[1047] Yes, I would say that is true and yet, your Honor, if you had we will say a 1953 top and you have a replacement top on it and this top is relatively good yet, you could not expect that if you accidentally poked a hole in the top, you could not expect people who put the top on to replace that for you for nothing.

[1049] Q. What is your understanding of the function of the wiper arm on these cars? A. The wiper arm was originally designed to assist the fabric and to hold it over as close as possible to the belt rail and to assist in producing a good quality, a good looking job, especially from a styling standpoint or an engineering trim standpoint.

It also aids in keeping out thieves because it has a bar at that point. It is also is an assistant, in the belt, preventing snow and ice from getting in there, if you had snow [1050] coming down at an angle and striking—

* * *

Q. If there is a gap, is it doing its job, as you testified? A. It isn't doing it as good as it could do.

* * *

[1051] *Cross Examination by Mr. Wolf*

XQ. Mr. Pickard, when did you first see a fabric top which was automatically operated and having a wiper arm? A. I wouldn't be able to give you the exact date, but it was on the production of General Motors cars, 1950.

XQ. Presumably around 1950? A. Yes.

XQ. Did you see this independently, or did somebody call it to your attention? A. No, we are watching out for those sort of things all the time.

XQ. When you saw it did you recognize that as being a real solution at that time?

The Court: As what?

Mr. Wolf: As being a real solution to this problem that he was considering at that time? A. Yes, we did.

* * *

[1054] XQ. Now apparently one of the principal things you recognized, that I have been able to gather from your testimony, is that the fabric was attached down below the body line; is that correct? A. That is correct.

XQ. And the top worked automatically? A. That is right.

XQ. And then you also considered it of some importance the use of this wiper arm as part of the whole structure? A. That's right. A cooperating part. I considered the attachment of the fabric below the belt at the proper length to be the fundamental principle to our problem, the

automatic raising and lowering of the fabric. And that was the revolutionary idea.

* * *

[1055] XQ. Well, you said you worked for a long time on the problem of trying to effect a seal in proper fashion? A. That's right.

* * *

[1058] XQ. In substance, let us turn back the clock to around 1949.

The Court: Turn it back to a time before you saw Mackie-Duluk.

The Witness: Yes.

The Court: Shall we say immediately before you saw it and you have before you, your patent lawyers got to work and said maybe these will help, they showed you the three Bessonneaus and Ackermans.

Mr. Wolf: Yes, your Honor.

XQ. What particular ideas might you have developed from these references? A. Oh, I would say that these Bessonneaus definitely are no help.

XQ. I am not talking about no help in an abstract— A. No help in suggestions, it does not offer any suggestions.

XQ. It doesn't offer you any suggestions whatsoever? A. No, indeed.

XQ. How about the Ackermans patent? A. The Ackermans does not offer a suggestion, not an answer.

XQ. Does it give you any direction to the problem you are concerned with? A. It does not. We have had fabrics straddled on the belt [1059] rail before, it did not answer our problem.

XQ. My understanding of Ackermans is it does not straddle, it is inside. A. It is only a flap inside. We have had them inside and outside before, that does not answer the problem.

XQ. Ackermans was, as I understand it, an automatic operable top, it stretches the fabric into contact? A. That is right.

XQ. Wouldn't this have suggested to the Ford engineers a line of endeavor they might engage upon? A. No.

XQ. It would not suggest it to you? A. No, it would not; it not only would not, it did not.

XQ. You mean you did see it? A. We knew of it.

XQ. You knew of Ackermans? A. Yes, sir, but we did not consider it to be of value.

XQ. Let us specifically look at the Bessonneau structure. Don't you agree that Bessonneau—let me ask you this. In this Bessonneau we have on the board, the first Bessonneau patent examined, am I correct in understanding your testimony, you said this would not work? A. I said it would not be a production type of thing.

* * *

[1060] XQ. The objections you made to this Bessonneau and the other Bessonneau and Ackermans is one which is based upon the impracticality of the device from the point of view of production engineering? A. I would also say from the point of view of efficiency, I would say that is a very inefficient operation, it isn't an automatic arrangement as we would consider.

XQ. It is automatic to an extent, you have to get in and out. A. That is all, but there is no sealing to it, it does not automatically seal.

* * *

[1063] XQ. Did you look at Figure 2 of the patent? A. Yes, I did.

* * *

XQ. Apparently it does not contact the side of the car at least from this figure. [1064] A. I do not know, that figure is not a drafting figure, it only shows things in broad outline. You have got a demonstration of it here.

XQ. Do you disagree with the operation of that hoop when it is raised up that it would contact a line such as we show there? A. If you knew that was that way, you would have made your model that way. If shows to me you don't read the drawing, the model is not made anywhere near like this.

• • •

XQ. Now you stated you had felt there were a number of difficulties with the operation of this particular construction. [1065] A. Yes, sir.

XQ. Those difficulties, I presume, were difficulties of engineering, of production engineering, is that right? It would not be practical to put on a Ford motor assembly line? A. It isn't practical to put on a line.

• • •

[1069] XQ. Might not the Ackermans construction suggest to you that it would be feasible to bring a flap down inside, the inside of an automobile? A. No, I am sorry to say it did not. I wish it had. I would like to have been the fellow who thought of that first.

XQ. To you yourself it did not suggest that? A. No, it did not. I wish I had.

Mr. Pollock: Was the question, just inside of the fastening?

Mr. Wolf: Bring it down inside.

The Court: I assume he means, the witness understood him to mean to bring it down further.

The Witness: Like Mackie-Duluk.

• • •

[1071] XQ. Let us get back to this first Bessonneau point. Would you disagree with me in my contention that this bow 2 suggests a movable arm that operates from a well down below the body line to press the fabric towards the body line, regardless where it is attached? A. All I can

say is, if they had submitted that to me, I would not consider it of any value at all.

* * *

XQ. I am just saying, look at that portion of the patent which is referred to as the tilt hoop 2, in connection with that tilt hoop is it not true Bessonneau uses it here and suggests a device, provides a member adapted to move upwardly from the bottom of the car over the well of the car and press the fabric or urge the fabric toward the body line? A. I would say it does not.

* * *

[1074] XQ. All right. Now let me ask you a further question. Referring just to this element number 2 and the linkage around it or connected to it, I would presume that if I now direct your attention to it—there are a number of features to this construction. A. A number of what?

XQ. A number of features. A. Features, yes.

XQ. Features that might be used at some future time or some construction. Well, what features do you see about this? A. I don't see any.

XQ. As an engineer, don't you think you would be able to see— A. I don't see any.

XQ. You don't see any that you could possibly use? [1075] A. No, I don't.

XQ. There isn't any utility this thing might have? A. Yes, sir, I don't think there is anything that I would spend a nickel's worth of time on. I'm sure if there was—let me answer this—if there was, somebody would have discovered it before now. The fact that no one has used it—

XQ. That isn't an answer. A. Well, it is.

The Court: It's no more argumentative than your question. That's the trouble with argumentative questions.

* * *

XQ. Well, without referring to the '58 cars necessarily, will you agree that the fundamental concept that you saw

in the G.M.'s '50-'55 was the attachment of the fabric below the body line a [1076] sufficient distance to permit raising and lowering the top; is that right? A. Yes.

XQ. That's what you consider to be the real point? A. That was the real crux of the whole thing. That was the revolutionary idea.

XQ. And the attachment or the extension of the bow mechanism in the form of a wiper arm to create the seal was just an added element which was just extra. A. Well, I wouldn't put it as just extra. I would put it, at that time we considered that a wiper arm was in cooperation of the rest of the design.

XQ. So that at that time it was considered an absolute necessity or a very desirable necessity? A. A desirable feature.

XQ. And it wasn't until a long time afterwards you found out you could eliminate the wiper arm and get the same sort of results; is that right? A. Well, in the cars we're talking about we didn't eliminate the wiper arm.

XQ. Yes. But I mean, it wasn't until subsequent to these cars we're talking about you discovered you could eliminate the wiper arm by redesigning certain elements, I presume, to get the same sort of result? A. That's right.

[1077] XQ. You have indicated also that you have done considerable looking at General Motors cars. Have you in looking at General Motors cars concluded that they provide the original construction with respect to the same tolerances and closures that they do in the Ford Motor Company? A. I would say principally the tops we have seen provided the same general construction and appearance, for the most part, that are on the original tops—the general appearance.

XQ. As Ford? A. As Ford.

[1078] XQ. Have you seen the General Motors tops where they use a cushion? A. Yes.

XQ. Have you seen many of the original tops using cushions? A. Yes.

XQ. Did you notice the tight fit in the areas between the cushion and the body line? A. Yes, I did.

XQ. Is that usual in the General Motors construction? A. Yes, it is.

XQ. You criticized the Ackermans construction, I believe, and said that if you attempted to put a wiper arm in that construction it would have to be above the trough. Is that correct? A. No, I did not say that. I just said that the Ackermans construction would not lend itself to the wiper arm as well as if the material were lower down; that ordinarily to place the wiper [1079] arm in the inside of the body, it would have to be placed roughly when the top was folded down below the drain trough.

XQ. The wiper arm in Ackermans would have to be below the drain trough in its folded position? A. Yes.

XQ. You find that a defect? A. A defect?

XQ. Yes. A. In the Ackermans?

XQ. Yes. A. Well, only because the wiper arm would go below the bottom edge of the fabric; and, as the wiper arm comes up, the fabric may not be over against the wall of the car as the drawing shows; it might be standing inward or tilted inward, and the wiper arm would catch the bottom of the fabric.

XQ. But there is no problem in this point; apparently the mere fact it might bring the wiper arm down below the trough is of no consequence? A. Well, I would say it was of major consequence.

XQ. But aside from the length of the flap. A. Well, I would just say it can be released at the same time. If it is a short flap they have no wiper arm.

[1081] XQ. Examining the second Bessonneau patent, do you recall the arm 60? A. Yes, I do.

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[1082] XQ. Would that patent have given you any food for thought if you saw it some years ago? A. No, it would not.

XQ. You mean, it wouldn't even have suggested lines of work that you might embark upon? A. No, I see nothing whatsoever that would indicate any help at all from a production standpoint.

XQ. I'm not talking about the production standpoint. A. Well, we have talked about production.

XQ. I'm talking about a suggested line research. A. No, when we work on research we have to be practical or we wouldn't get paid. When you have a bow like that underneath and would have to take the whole assembly off, set the fabric to the bow and then reassemble the body—right away it would be thrown out.

[1083] XQ. Have you seen any references at all which would suggest lines of research that you might embark on which would conceivably solve this problem? A. No, I haven't. I've never seen a thing that would help us.

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XQ. You mentioned you saw a number of cars with shingles. Is that right? A. That is right.

XQ. And you mention distances that you observed them? A. Yes.

[1084] XQ. I presume those distances were distances above the body line of the car? A. That's right.

XQ. Okay. You also talked about patching. You would agree with me that those patches are not at all usable in all instances; is that correct? A. No, I would not agree with you. They are useful and can be used in all instances that I know.

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[1085] XQ. Tell me something about how good these patches are. Don't you usually find where you have to put a patch on a car that starts to get these wear holes in it, that you end up where you have so many patches on that the top might look like quilt work? A. Well, actually a patch—I've never seen a patch put on what you might call a wear spot.

[1086] A patch is usually put on a hole. A hole is usually caused from either, like I said, hailstorm coming through or somebody throwing a rock through it, somebody cutting it with a knife.

When your top is folded down, you fold your top in a well, in a compartment. If you look in there you will find shoes in there, roller skates, all these kinds of things.

You might fold the top down on some sharp instrument, it would cut the fabric. You would patch that.

XQ. The use of patches apparently or primarily is for conditions where the top is in otherwise relatively good condition except for a very local area? A. That is right.

XQ. Have you ever had occasion to learn of an individual bringing a car in and having a section of the fabric top removed and replaced, cut to order? A. Yes, sir, we have done that.

XQ. You have done that on new tops? A. Yes, sir.

XQ. Is that very conventional, when a car has had a top on it for a year or so or a year and a half, and one part of it starts to wear a lot more than the other? A. I would say again, where we have done this specifically might be a case of a quarter. By a quarter we mean one of the pieces of material sewn over the outside or center section [1087] of the car.

XQ. Talking about new cars? A. It could be a new car. It could be an older car, which has damaged that quarter. It might be damaged all the way along. Then you would take that top all off, sew on a new quarter and put it back.

XQ. Supposing the top has been on for a year and a half, two years or more, would you normally do that? A. No, you would not, normally.

XQ. What would you normally do? A. You would normally replace the whole top.

XQ. You said before, Mr. Pickard, to your knowledge the Ackermans patent was never put into production, is that correct? A. That is correct.

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[1088] *Redirect Examination by Mr. Pollock*

Q. You were asked about tolerances at the Ford Motor Company. Inviting your attention to the rear quarter section, when a car is going down the assembly line do you always have a good fit at the rear quarter, speaking of convertible automobiles, say 1952-1954 models, the belt line region, do you have a good fit at the belt line? A. I would say generally we do. There are exceptions as we have in all other jobs.

Q. If you have a sloppy job at the belt line does that affect the operation of the top? A. I would say one of the strong features of this construction [1089] is that it does not demand that the top material be perfectly assembled or any other thing.

This construction lends itself well to production use because of the fact it is automatic and in spite of the fact you have poor workmanship it still is essentially a good job.

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